HOSPITAL ABSTRACTS

A MONTHLY SURVEY OF WORLD LITERATURE

PREPARED BY THE DEPARTMENT OF HEALTH

AND SOCIAL SECURITY

VOLUME 17, NO. 4, ABSTRACTS 455-610. APRIL 1977

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HOSPITAL ABSTRACTS

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HOSPITALS IN GENERAL

455. WERLEY, H. H. and others, editors. **Health research: the systems approach.** New York, Springer, 1976, xxi, 330pp. $16.70

This volume contains the papers presented at an interdisciplinary conference, the major purpose of which was to provide a medium for information exchange between health professionals and systems specialists interested in studying health delivery systems that use the general systems approach. The papers are arranged in the following groups: general systems theory; health professionals as subsystems; administrative and support subsystems; designing research using systems theory; systems approach applied to the realm of client and practitioner; and systems concepts to systems utilization.

HOSPITALS IN GREAT BRITAIN

456. NORTHERN IRELAND. NORTHERN HEALTH AND SOCIAL SERVICES BOARD. **Development of hospital services in the area of the Northern Health and Social Services Board. Volume 2.** Ballymena, Co. Antrim, Northern Health and Social Services Board, 1976, [iv], 610pp.

This volume contains the detailed information which could not be conveniently included in the main report [see *Hospital Abstracts*, Vol. 16, Abstract 1528]. It includes: sources of information; survey methods; detailed accounts of individual hospitals; and detailed background information on future requirements.

PLANNING, DESIGN AND CONSTRUCTION

See also Abstract Nos. 456, 462, 582

457. KAPPLER, D. and RAEBER, U. Zeil- und Gesamtplanung im Krankenhauswesen. **[Objective and general planning in the hospital service.]** *Veska*, Aarau, 1976, Nov., vol. 40, no. 11, pp. 576-579; Dec., vol. 40, no. 12, pp. 630-635.

The first part of this paper outlines the theory behind the planning of an acute hospital, bearing in mind the requirements of regional planning and the need to assess future population movements and age structure. The steps to be taken are dealt with as follows: relationship to regional planning; study of the catchment area; capacity planning; objectives; programming; basic concept; functional project; cost estimates; time limits and financing. The second part applies these principles to the planning and design of a new diagnosis and treatment block for the Chur Regional Hospital.

458. BERRIMAN, W. T., ESSICK, W. J. and BENTIVEGNA, P. **Capital projects for health care facilities.** Germantown, Md., Aspen Systems Corporation, 1976, x, 253pp. $16.00

This guide to the design, building and financing of health care projects in the United States covers: alternative approaches to a project; stages of a project; comprehensive health planning; National Health Planning and Resources Development Act of 1974; existing controls; institutional planning; planning and controversies; selection of the project team; design and construction processes; contractual provisions; factors affecting financing; sources of long-term financing; and financing decisions.

459. FRAUENFELDER, J., FLURI, R. K. and HUBER, M. Datenerhebung und –Auswertung im Rahmen der rollenden Planung. **[Data collection and evaluation in continuous planning.]** *Veska*, Aarau, 1976, Dec., vol. 40, no. 12, pp. 617-622.

A firm of consultants which has been advising the Graubünden Canton on its health services planning since 1973 describes its methods, with particular reference to hospital services. They are based on a complete information system and data are checked every year. Planning takes account of modifications and trends, both socio-economic and socio-medical, and is thus continuing, flexible and up-to-date. Patient data is processed at cantonal, regional and hospital level. Assessment of bed needs is made on the basis of frequency of admissions, length of stay, the capacity of hospitals and the population. The influence of external factors is also important. A graduated provision of services avoids overcapacity.

BUILDING COSTS

See also Abstract No. 461

460. GASBARRI, S. and ODDI-BAGLIONI, B. Ospedali: percentuali quantitative e costi: ricerca sperimentale per la determinazione delle percentuali quantitative riferita alle principali categorie di lavori edili. **[Hospitals: quantitative percentages and costs: research on the determination of quantitative percentages relating to the principal categories of building work.]** *Tecnica Ospedaliera*, Milano, 1976, Oct., vol. 6, no. 10, pp. 31-37.

The conventional unit index price method of calculating the cost of new hospital buildings is not satisfactory in times of rapid inflation. The authors have studied the cost of six new 200- to 900-bed hospitals in Italy in an attempt to provide a more precise method of predicting costs. They compared the dimensions of the buildings—volume, area of external surfaces, area of external walls—with the amounts of various types of work carried out. They present their calculations in a series of six tables. Work on double ceilings, for example, would cost 0.16 per cent of the value of the work on the total area of all storeys.

HOSPITAL DESIGN

461. CULBERTSON, R. A. **Shell space construction: future hedge or hazard?** *Hospital Progress*, St. Louis, 1976, Nov., vol. 57, no. 11, pp. 86, 88, 103.

Shell space construction has been regarded as a cost-saving device in hospital

construction to be used as protection against both future demand for health services and inflation of construction costs. However, this analysis reveals that it may freeze institutions and agencies into following current plans when they have become obsolete, and it may tie up funds that could be used better for other purposes. Construction of shell space appears justified only when definitive plans are prepared for an area's use and a strict timetable is set for completion and occupancy of that area.

462. KLECZKOWSKI, B. M. and PIBOULEAU, R., editors. **Approaches to planning and design of health care facilities in developing areas. Volume 1.** (WHO Offset Publication No. 29) Geneva, World Health Organization, 1976, 145pp. Sw.fr.21

This is the first volume in a series which will deal with the problems of planning, design and functioning of medical care facilities in developing countries. A synoptic table is provided of the topics to be covered in the series as a whole. This volume contains papers on: the importance of legislation and administration; the role of area-wide planning and functional programming in the planning process; rationalization of medical care buildings in developing countries; advanced building techniques and their use in developing countries; and influence of climate on buildings.

463. STONE, P. **Hospitals: the heroic years.** *Architects' Journal*, London, 1976, Dec. 15, vol. 164, no. 50, pp. 1121-1148.

The history of hospital design in the Western world is considered from the late 15th century to the present day. There was little development of hospital design during the first half of this century, but in the 1950s and 1960s there was great activity in the theory of hospital design especially in Scandinavia, Britain and the United States. The effect of the development of the National Health Service over the last 25 years upon hospital design is discussed together with the various planning methods used in the United Kingdom. Design features of district general hospitals, considering Mark I, II and III types, are outlined. Current developments in teaching hospitals are presented. The role of the Department of Health and Social Security in advising on design production, cost control and in the development of Harness and nucleus hospitals is considered together with the prospects for the immediate future. The paper is illustrated with many plans, photographs and diagrams.

DESIGN OF INDIVIDUAL GENERAL HOSPITALS

464. **Giant medical center offers all major services on all floors.** *Hospitals*, Chicago, 1976, Oct. 16, vol. 50, no. 20, pp. 37, 40, 42.

After 10 years of planning and four years of construction the facilities of the former 525-bed Cedars of Lebanon Hospital and the 289-bed Mt. Sinai Hospital have been combined to form one complex, Cedars-Sinai Medical Center, on a 23-acre site in Los Angeles. The 1,120-bed hospital is U-shaped and contains about 1.5 million square feet of space (architects: A. C. Martin and C. Luckman). The total cost was $100 million. There is a professional and administrative support tower to which two patient care towers are connected at each level. From the broad four-storey base, which houses services and facilities such as catering, pharmacy, radiotherapy, emergency and out-patient, rise five floors of wards in the three towers. Each floor has its own clinical, support and treatment services related to the care of the types of patients on

the floor, and its own pharmacy, operating suites, radiology areas, laboratories, intensive care units and a unit kitchen. The nursing staff work in teams serving clusters of 16-rooms which are composed of four, four-room subclusters that form U-shaped units by extending from the corridor to the perimeter wall. Each wing contains 64 beds; each patient care level contains 128 beds plus 10 to 20 intensive care beds. The communications system is outlined and the advantages of the decentralized arrangement discussed. The structural features are designed to resist earthquake damage; floors are supported by truss members and seven-foot long interstitial spaces between floors allow easy servicing and flexibility of utility and service mains. Three plans are included.

465. AUROUSSEAU, P. L'hôpital de Saint-Denis. **[Saint-Denis Hospital.]** *Techniques Hospitalières*, Le Kremlin-Bicêtre, 1976, Dec., vol. 32, no. 375, pp. 70-72.

The new 500-bed hospital at St. Denis serves an area with a population of 220,000 inhabitants. It is a rectangular tower block on a wide two-storey base. The base houses all the technical, medical, and general departments. The wards are housed in eight of the nine storeys in the tower block and the kitchens and staff restaurant are on the ninth floor. Considerable attention has been paid to the planning and equipment of the out-patient departments, which appear to be much busier in provincial hospitals of the same size. The emergency and resuscitation services and the operating theatres are grouped together on the ground floor. The radiology department is considered to be one of the best in France. Four photographs but no plans of the hospital are included.

466. HARTUNG, R. H. J. Daler-Spital, Fribourg. **[J. Daler Hospital, Fribourg.]** *Veska*, Aarau, 1976, Dec., vol. 40, no. 12, pp. 610-612.

An extension block at the Daler Hospital, Fribourg, was completed in 1976 (architect: Robert H. Hartung, Fribourg). The subground floor houses laundry, stores, workshop and other services. On the ground floor are entrance hall, administration, waiting room, laboratory, out-patient department, and doctors' rooms. On the first floor is a 16-bed ward (single and double patients' rooms) bringing the total number of beds up to 95; the second floor houses the operating suite with two theatres and recovery room. The ground and upper floors link directly with the old building. The paper is illustrated with plans of the ground and second floors and six photographs.

DESIGN OF SPECIAL DEPARTMENTS

467. THEALL, J. N. and PIZER, I. H. **New library buildings. Part VIII. The Library of the Health Sciences, University of Illinois at the Medical Center, Chicago.** *Bulletin of the Medical Library Association*, Chicago, 1976, Oct., vol. 64, no. 4, pp. 402-411.

The new building for this library was under construction for 13 months, using phased construction techniques, and finally opened in October 1973. It is a self-contained and physically independent building consisting of three storeys above ground and a basement. The main entrance to the building is located on the first level and has a ramp for the physically handicapped. The lower level is almost entirely devoted to the multi-

media services department. On the first floor are the major service departments of the library. The administrative department, serials department and conference room are on the second floor together with the shelving for the bound periodicals. The third floor houses the monographic collection of theses, the pathology museum and auditorium. The building is designed for vertical expansion to a maximum of seven floors, consequently each floor has independent heating and ventilating systems. The design and furnishings of the library are discussed. Plans of each floor and five photographs are included.

468. MAFFEI, P. L. I servizi di anestesia e rianimazione "SAR": contributi conoscitive per la progettazione. **[Anaesthesia and resuscitation service: contributions to its planning.]** *Tecnica Ospedaliera*, Milano, 1976, Oct., vol. 6, no. 10, pp. 17-30.

The author discusses the principles on which the design of new resuscitation and anaesthesia departments should be based. The unit should be sited in close proximity to the emergency department, the operating theatres, and the laboratories. The optimum number of beds is from four to 12. A single ward, with partitions, is more economical than single rooms. Construction based on a six-metre module is the most flexible and steel is recommended as the most suitable material for construction. For ease of maintenance, pipes and cables leading to the unit should be sited in the space between the ceiling of the unit and the floor above. Pipes and cables, etc., in the unit should run along the wall behind the beds and be concealed in a metal housing. Innovations include a visitors' gallery above the ward. The paper is illustrated by a series of 12 plans and five photographs of existing units in Italian hospitals.

469. HEAL, J. E. and BROCKS, B. E. **Planning the A.D.L. unit: materials and equipment chosen at Oldchurch Hospital.** *British Journal of Occupational Therapy*, London, 1976, Nov., vol. 39, no. 11, pp. 274-278.

The single-storey extension to the occupational therapy department at Oldchurch Hospital, Romford, was paid for partly from exchequer funds and partly by locally raised money. It is designed for the future, taking into account both changes in social patterns and technical advances in equipment for the physically handicapped. The unit consists of kitchen, bathroom, two bedbays, four dressing cubicles, patients' and staff cloakrooms, large wheelchair area and general purpose room for storage. Details are given of each room and area and a plan and 12 photographs are included.

DESIGN OF SPECIAL HOSPITALS OR UNITS

470. Das Widmerheim in Horgen: ein neues Krankenheim im Kanton Zürich. **[Widmerheim, Horgen: a new nursing home in the Canton of Zürich.]** *Veska*, Aarau, 1976, Dec., vol. 40, no. 12, pp. 613-616.

The new 100-bed Widmerheim long-stay hospital for the chronic sick and elderly at Horgen came into use in June 1976 (architects: Hertig, Hertig and Schoch, Zürich). The ground and subground floors house administration, kitchen, laundry and other common services as well as an occupational therapy department, day-room and

cafeteria. The four upper floors each have 24 beds (six two-bed and three four-bed rooms) and an isolation room. Each subgroup of 12 beds has its own sluice and toilets. A six-storey residential block has flats and bed-sitting-rooms. Up to eight beds can be used for short-term 'holiday patients' who are admitted to allow those looking after them at home to get a holiday. The paper is illustrated with plans of the ground floor and a typical ward floor and four photographs.

471. WIEKART, K. Een woongemeenschap voor bejaarden: De Drie Hoven. **[A communal home for the elderly: De Drie Hoven.]** *Instelling-Management*, Amsterdam, 1976, Nov. 24, vol. 8, no. 11, pp. 7-11, 13-15.

This complex (architects: Herman Hertzberger, Amsterdam) houses over 600 physically and mentally handicapped elderly people. From a four-storey central building covered 'streets' branch off each floor: east to a block of 55 flats for married couples, west to a large residential home, north to a smaller residential home and staff accommodation block, and south to a nursing home for the chronically ill and disturbed. Administrative, technical and domestic offices, kitchen, restaurant, lecture rooms and exhibition hall are accommodated in the central block, with more administration, physiotherapy and sickbays in the connecting wings to the streets. On the second floor in the centre is the 'village square' with bandstand, recreation facilities, café, shop, launderette, and extending into the streets a library, occupational therapy, hairdresser, bank, and post office. The streets are a network of horizontal and vertical connections with courtyards, steps, gardens, terraces and balconies, a total length of nine kilometres. The homes have single, double and four-bed units. Decorations are chosen by the patients, who can also bring their own furniture, keep pets and have their own housekeys. The atmosphere is relaxed and the 320 staff, mostly non-residential, wear no uniform. The paper includes details of layout, staffing costs, examples of menus and recreation programmes, and plans of the whole complex, village square and four living units.

472. GUNZBURG, A. L. **An operational philosophy of enrichment applied to the design of a children's family unit.** *British Journal of Mental Subnormality*, Birmingham, 1976, Dec., vol. 22, no. 43, pp. 112-117.

Life styles of different age groups have different characteristics. This applies also to mentally handicapped people. In order to encourage and support development of the mentally handicapped to attain their appropriate life style, the physical environment must be tailored and enriched to provide opportunity to experience, learn and practise. A design for a 'family home' for children in the transition stage is presented and discussed, illustrating how specific individual and educational needs ought to guide the design of a home for a particular age group of mentally handicapped people. The practical element of the design has developed totally from considering children of a particular age group and from speculating on how to develop their latent abilities. A plan of the unit is included.

WARDS AND PATIENTS' ROOMS

See also Abstract No. 551

473 GRAHAM, J. L. **Building a flexible zone for the self-care patients.** *Health and Social Service Journal*, London, 1976, Dec. 17, vol. 86, no. 2521, pp. 2236-2237.

The principle of progressive patient care and grouping of patients according to their needs has had a mixed reception from medical and nursing staff. Many people agree that the most economic and efficient way to care for patients is to group them according to condition and nurse dependency bringing together the main identified groups: intensive care, intermediate care and self-care, under one roof and under one management team. The main difference is the recognition of a self or minimum care area. Two Scottish reports *Ward design* [see *Hospital Abstracts*, Vol. 3, Abstract 810] and *Upgrading of wards* [see *Hospital Abstracts*, Vol. 8, Abstract 688] recommend grouping of patients and give emphasis to certain design features that best satisfy the needs of patients. Recommended design features are discussed. The minimal or self-care group has now been recognized by the number of convalescent hospitals and annexes created to help increase the turnover of patients in acute units. The planning solution at Stobhill General Hospital, Glasgow, was to upgrade two two-storey ward blocks and to identify three main zones with a 'switch or swing' situation between each. The main entrance to each section will be clearly defined. The design of the three areas is outlined. Nursing services have been centralized accepting the longer distances from the self-care patients, which allows some sharing of support rooms. Switching in an emergency situation can be readily achieved. The benefits of the system are the convenience and continuity of care provided without transferring the patient to another hospital, and the best deployment of staff. The end result is a nursing unit seeking most of the criteria described in the reports and improving staff and patient contact. Plans for the ward units before and after conversion are included.

ENTRANCES, CORRIDORS AND STAIRWAYS

474. BATTY, G. R. **Public areas: which areas should be included?** *Hospital Administration in Canada*, Don Mills, Ont., 1976, Dec., vol. 18, no. 12, pp. 29-30.

Public areas, on the basis of first impressions, play a major role in the formation of the hospitals' image in the mind of the general public. While the main hall and staircase are the obvious public areas, the following adjoining facilities must be included in the planning specification: information/reception desk; cloakroom; public washroom; wheelchair alcoves; drinking fountains; and telephone booths. Other public areas are scattered throughout the hospital and may be classified into entrance and non-entrance functions. The former are: emergency entrance; canopied ambulance entrance; out-patient entrance; 24-hour entrance; staff entrance; and doctors' entrance. The non-entrance public areas include: gift shop; sweet shop; coffee shop; hairdressing salon; and quiet rooms.

ENGINEERING SERVICES

475. PHILIPPON, G. Analyse de gestion. **[Management analysis.]** *Gestions Hospitalières*, Mantes, 1976, Nov., no. 160, pp. 871-874.

Technical departments are usually responsible for buildings, electro-mechanical and electro-medical equipment, heating, safety, and data processing. The efficiency of the

individual department can only be assessed by comparing it with others and in particular with technical departments in private clinics, or by comparing its direct labour schemes for construction and maintenance with schemes carried out for it by private enterprise. Management analysis can demonstrate what is done, and why and by whom, what it costs, and who benefits from it. Its application to the assessment of the efficiency of the various activities of technical departments is described.

INSTALLATIONS IN GENERAL

See Abstract No. 479

COMMUNICATION SYSTEMS

476. SCHMITZ, H. H., ELLERBRAKE, R. P. and WILLIAMS, T. M. **Study evaluates effects of new communication system.** *Hospitals*, Chicago, 1976, Nov. 1, vol. 50, no. 21, pp. 129-130, 132, 134.

Deaconess Hospital, St. Louis, installed a computerized electronic information system to improve the accuracy and efficiency of communications. The system transmits all information in a legible form and identifies the source, destination and time of all messages. To determine any changes in work patterns a research design scheme was carried out. Pre-installation data on work load and activities for nurses and secretaries was compared with information collected after the installation of the system. The results indicated that the system reduced the time spent by nurses in requisitioning items, telephone calls, transporting patients and equipment although there was no significant change in the amount of time spent in clerical activity or caring for the patient. Secretaries spent more time handling supplies and in clerical activities. The discipline of the communications system appears to be improving efficiency.

BOILERS AND BOILER HOUSES

477. GREAT BRITAIN. DEPARTMENT OF HEALTH AND SOCIAL SECURITY and WELSH OFFICE. **Commissioning of oil, gas and dual fuel fired boilers, with notes on design, operation and maintenance.** (Health Technical Memorandum 26) London, Her Majesty's Stationery Office, 1976, 12pp. £0.60

This memorandum covers the commissioning, operation and maintenance of oil, gas and dual fired steam and hot water boilers, with burner ratings in excess of 600 kw, and the design factors to be considered to enable these functions to be carried out satisfactorily. The proposals are of a general nature to cover the wide range of boiler and burner designs but the standards set are regarded as a minimum requirement. Commissioning instructions in draft form are given in appendix as a basis from which to formulate standard instructions for individual installations.

MAINTENANCE OF BUILDINGS AND EQUIPMENT

478. GOODMAN, G. R. **Organizational scheme facilitates device inspection, documentation.** *Hospitals*, Chicago, 1976, Nov. 16, vol. 50, no. 22, pp. 102-105.

This paper describes the organization and documentation of the preventive

maintenance programme in use at St. Luke's Episcopal Hospital, Texas Children's Hospital and Texas Heart Institute which are located in the Texas Medical Center, Houston. The programme involves the use of: magnetic display boards for scheduling maintenance, including a large main board and smaller boards in individual equipment areas; a Kardex system for recording the maintenance history of an individual item; and a series of co-ordinated inspection forms and notes. A photograph of the main scheduling board and examples of the inspection forms and notes are included.

479. HUYBOOM, J. St. Elisabeth's of Groote Gasthuis (600 bedden) te Haarlem: organisatie van het onderhoud ten behoeve van de technische installaties. [**St. Elisabeth's Hospital, Haarlem (600 beds): organization of maintenance of the technical installations.**] *Technische Gids voor Ziekenhuis en Instelling*, Amsterdam, 1976, Dec. 21, vol. 45, no. 117, pp. 794-797.

This maintenance system is a combination of preventive maintenance, improvements to reduce future maintenance, a ticket service for small repairs, and priority for emergencies. It is achieved by: (i) making an inventory of everything needing maintenance or periodical replacement; (ii) estimating the time and amount of labour required for each item; and (iii) dividing the technical labour force into groups of skilled labour. Each maintenance item is given a control list with a strict timetable. Extensive repairs are carried out between routine work or given to an outside contractor. A programme is planned a year ahead with the aid of coloured clip-buttons and numbers plotted on a planning board showing the maintenance items horizontally and the labour groups vertically. Each item has its own routine card. The amount of labour available within certain times can be read on the board. The timetable is flexible to allow for extra work, illness, etc. Labour groups meet every fortnight to discuss results and future course of action. Books with coloured tickets in triplicate for small repairs are held by departmental heads for requests once a week. One year's experience showed a reduction in breakdowns and repairs required. More details are given of planning method and ticket service, including a list of colours for various labour groups, examples of repair tickets, internal communication form, routine card and control list, and three photographs of the planning board.

SANITARY EQUIPMENT AND FITTINGS

480. AGNEW, K. **Development of mobile toilets.** *Engineering in Medicine*, Bury St. Edmunds, 1976, Oct., vol. 5, no. 4, pp. 100-104.

This paper describes a project at the Royal College of Art to develop a portable toilet which could be taken to partially handicapped patients, particularly the elderly, in hospital, rather than having to take the patients to the toilets. The aspects covered include: the principles on which the design was based; how the design evolved; production of mock-ups and prototypes; and commercialization of the venture. Two photographs are included.

EQUIPMENT, FITTINGS, FURNITURE

FLOORS AND FLOOR COVERINGS

See Abstract No. 526

LOCKERS, BED-TABLES, CHAIRS

481. BRITISH STANDARDS INSTITUTION. **Specification for hospital bedside lockers. Part 2. General purpose lockers of wooden construction with facilities for hanging day clothes.** (BS 1765: Part 2: 1976) London, B.S.I., 1976, 4pp.

This standard specifies basic user and design requirements, dimensions, materials and constructional requirements and finish for general purpose hospital bedside lockers, made of wood, with facilities for hanging day clothes.

LIFTING DEVICES, HOISTS, WEIGHING MACHINES

482. VALMAN, H. B., WRIGHT, B. M. and COURTIN, J. de. **Rocking-horse paediatric weighing-machine.** *Lancet*, London, 1976, Dec. 25, vol. ii, pp. 1389.

The out-patient department at Northwick Park Hospital has converted a conventional beam-weighing machine for weighing children between one and three years. A rocking horse has been fitted to the machine so that, with its rider, its centre of gravity is near the centre of the platform. The device has been in use for 18 months and has completely eliminated trouble with weighing, the only difficulty being to persuade the child to get off the horse at the end of the weighing.

MEDICAL EQUIPMENT

See Abstract No. 571

STAFF GENERALLY

483. OERI, H. R. Krankenhäuser und Arbeitsmarkt. **[Hospitals and the labour market.]** *Veska*, Aarau, 1976, Dec., vol. 40, no. 12, pp. 600-603.

This paper deals with two aspects of hospital staffing in Switzerland: the setting of a ceiling on staff complements to reduce costs; and the employment of foreign workers. Staff ceilings require careful selection of priorities to allow a reduction in one area which will permit a necessary increase in another. Part-time work can be helpful here although the more frequent change-over of staff which it can involve is a disadvantage. In 1974 33 per cent of hospital staff were foreign. At a Basel hospital 75 per cent of domestic staff were foreign: the foreign element in nursing staff increased from 20 per cent in 1957 to 38 per cent in 1974 and the figures for paramedical staff were 15 and 25 per cent respectively. While the number of foreign workers is excessive, recent restrictions on their admission will help to reduce them although it must be borne in mind that in some professions they come to Switzerland to complete their training. There will presumably always be a need for foreign domestic workers but it should be possible to replace wastage of nurses by students trained in Switzerland.

484. TRIPONEZ, P. Krankenhaus und Arbeitsmarkt unter Berücksichtigung der ausländischen Mitarbeiter. **[The hospital and the labour with special reference to foreign workers.]** *Veska*, Aarau, 1976, Dec., vol. 40, no. 12, pp. 595-599.

Up to 1974 Switzerland adopted a very liberal attitude to the admission of foreign workers, particularly in respect of those wishing to work in hospitals. This led to abuses as workers so admitted often took up other work after serving in hospitals for a minimum period: it also tended to discourage the Swiss from taking up a hospital career. Since 1974 procedures have been tightened up and foreign workers are only admitted if their labour is really required. Even so hospitals get some priority. In the present recession hospitals are urged not to take foreign workers unless they are really needed and the jobs cannot be done by Swiss workers. This opportunity should be taken to develop a long-term labour market policy. Everything should be done to encourage the Swiss to take up hospital work: part-time employment, particularly, should be considered.

STAFF COMPLEMENTS

See Abstract Nos. 498, 569

RECRUITMENT

See Abstract Nos. 495, 499, 500

SALARIES AND SUPERANNUATION

485. BORER, O. Probleme im Lohnsektor bei allfälliger Verkürzung der Arbeitszeit. **[Salary problems arising from a possible reduction in the hours of work.]** *Veska*, Aarau, 1976, Dec., vol. 40, no. 12, pp. 622-624.

It is proposed that the normal working week in Switzerland should be reduced from 45 hours to 40 hours with an intermediate stage of 42 hours. In this paper the personnel officer of the Lucerne Cantonal Hospital estimates what this would mean, in terms of extra staff and costs, for his hospital where most staff do a 45-hour week at present. Based on the reduction of three or five hours a week the percentage increase in staff required would be 6.6 or 11.1; based on average annual number of hours worked (45-hour week, 1,989 hours; 42, 1,856 hours; and 40, 1,768 hours) these staff increases would be 7.2 per cent and 12.4 per cent respectively. This would mean an increase in labour costs of Swiss Fr. 3.5 to 4.0 million. The suggestion that the shorter working week could be implemented with little or no extra staff, while adequate services are maintained, is rejected.

STAFF MANAGEMENT

486. **The hospital as an employer.** *Hospitals*, Chicago, 1976, Oct. 16, vol. 50, no. 20, pp. 67-121.

A series of nine papers is presented covering various aspects of hospitals as employers. Features considered include: (i) the increasing number of opportunities in

the health care industry as a result of expansion schemes; (ii) staff attitudes to management and the need for greater management training; (iii) the development of human resources within an organization; (iv) the relationship between the hospital and the community and how local communities can supply manpower needs; (v) the need for staff education; (vi) the importance of staff welfare; (vii) improvement in staff/employer relations can increase productivity; (viii) the creation of a functional, safe working environment within the hospital; and (ix) hospitals' relationships with health care professionals are now collective rather than individual.

STAFF TRAINING

See also Abstract Nos. 494, 501, 554, 604

487. LEYASMEYER, E. D. **The area health education center as a rural health care provider.** *Hospitals*, Chicago, 1976, Nov. 1, vol. 50, no. 21, pp. 107-108, 112, 114.

The area health education center (AHEC) is a system that links university health sciences resources with community health care providers and institutions enabling a greater sharing of resources and increased educational opportunities. A pilot AHEC has been established in Central Minnesota. The broad aims of the system are: (i) to help improve the distribution of health manpower; (ii) to make health care more available to remote areas; and (iii) to improve the quality of health care. The University of Minnesota AHEC and the Central Minnesota Community Consortium have been involved in a partnership agreement to carry out the aims of the AHEC. Rural rotations are being provided to introduce students to rural health settings and rural health care delivery methods during their training period; students spend between nine to 12 months with a rural tutor. Interdisciplinary team settings are being established in rural areas; a rural summer dentistry scheme is provided for students for 10-week periods. Specialty visits are provided and a regional system of undergraduate and post-graduate education developed. The AHEC also monitors the quality of care and laboratory services. A system of relationships has developed through which the health care needs of the area can be met through the production of appropriate numbers and types of health manpower and through the continuing education of existing health care providers.

STAFF WELFARE

488. PEARSON, J. C. G., PRENTICE, W. M. and RADWANSKI, D. **Survey of present health care provisions for staff of health boards.** (Scottish Health Service Studies No. 36.) Edinburgh, Scottish Home and Health Department, 1976, iii, 68pp. £1.00

This is a report of a study which aimed to assess the provisions at present made for all grades of staff employed in the National Health Service in Scotland. It is based on a postal questionnaire and visits to a stratified random sample of the respondents. The results are presented in a series of tables and discussed. Some occupational health facilities were lacking in most of the replies. Frequently, occupational health duties were reported as being carried out, although no staff were employed specially for this work. There was considerable lack of knowledge regarding occupational health in all categories of staff.

489. LEERS, W.-D., KOUROUPIS, G. M. and DONG, A. **Feasibility of routine testing for hepatitis B surface antigen in hospital employees and restriction of carriers.** *Canadian Medical Association Journal*, Ottawa, 1976, Nov. 20, vol. 115, no. 10, pp. 995-998.

Routine testing of hospital staff for hepatitis B surface antigen (HB_s Ag) was carried out in 1974 at Wellesley Hospital, Toronto, as radio-immunoassay tests became available. All 1,415 members of staff were tested routinely before employment and at a regular medical inspection; 25 (1.8 per cent) were found to be HB_s Ag-positive. Of the HB_s Ag-positive members of staff 55.2 per cent were Asians and 31.0 per cent Southern Europeans. Nurses and laboratory technicians were among the largest professional groups among the HB_s Ag-positive staff, each accounting for 20.7 per cent. Analysis of the results indicated that it was impracticable to carry out routine testing of hospital staff for HB_s Ag. Selective testing is now carried out for specific groups. Restriction from work in their units is proposed for positive members of staff of the renal and peritoneal dialysis units, casualty department, intravenous team and catering staff who are in direct contact with food. The question of routine testing for anti-HB_s is being studied so that it may be feasible in the future to employ in high risk areas mainly staff with anti-HB_s who would be at less risk of contacting hepatitis B from patients.

490. PHAROAH, P. O. D. and others. **Outcome of pregnancy among women in anaesthetic practice.** *Lancet*, London, 1977, Jan. 1, vol. i, pp. 34-36.

A survey was made of the outcome of the pregnancies of 5,700 women doctors first registered in England and Wales in 1950 or later. Although the doctors were not selected for their history of exposure to anaesthetic gases, their work at the time of conception was recorded. The results revealed that the spontaneous-abortion rate was 13.8 per cent in both anaesthetists and others; the still-born rate was unfavourable to anaesthetists being over twice as high as among the others, although the difference was not statistically significant. Infants born to anaesthetists had a lower mean birth-weight and a higher proportion weighing 2,500 gm. or less. Malformations of the heart and great vessels were higher among anaesthetists' children. Although several of these effects could be ascribed to chance, the confirmation by other workers suggests that the observed adverse effects are real. The magnitude of the effects is small but exposure to anaesthetic gases must still be regarded as an occupational hazard.

491. SNYDMAN, D. R. and others. **Hemodialysis-associated hepatitis: report of an epidemic with further evidence on mechanisms of transmission.** *American Journal of Epidemiology*, Baltimore, , 1976, Nov., vol. 104, no. 5, pp. 563-570.

A study was carried out of an acute outbreak of hepatitis B in a dialysis unit known to have an endemic hepatitis problem. The infection was spread parenterally and possibly non-parenterally. Nineteen per cent of the staff contracted hepatitis and all of these staff had close contact with patients. The prevalence of hepatitis B infection in staff was linked to the failure to use gloves and accidental needle puncture was associated with the development of clinical hepatitis. The data suggested that disease was transmitted to staff by contact with contaminated blood or close personal contact with patients. The presence of endogenous antibody protected both patients and staff

from antigenaemia. The hypothesis that contact with blood is the primary mechanism of spread of hepatitis B in dialysis units is supported. Gloves should be used and antibody-positive staff should dialyse antigen-positive patients.

SPECIAL CLASSES OF STAFF

ADMINISTRATIVE AND CLERICAL STAFF

492. BANDELIER, R. Le directeur d'hôpital, décideur responsable. **[The hospital director, responsible decision maker.]** *Gestions Hospitalières*, Mantes, 1976, Nov., no. 160, pp. 877-883.

The role of the hospital director is to unify, co-ordinate and stimulate. He carries the responsibility for the whole institution; when anything goes wrong it is the institution rather than the individual doctor or nurse who is held responsible. The director is also answerable to the staff and to the management committee. Power is divided between the various functions—medical, nursing, supplies, research, personnel, financial, organizational, and monitoring—and the director's power over some of these functions is limited or negligible. Hospital directors should be university graduates but generalists rather than technocrats. They should undergo specialized training and be well versed in management techniques.

MEDICAL STAFF

See also Abstract Nos. 490, 578

493. ORKIN, F. K. **Analysis of the geographical distribution of anesthesia manpower in the United States.** *Anesthesiology*, Philadelphia, 1976, Dec., vol. 45, no. 6, pp. 592-603.

The 1970 geographical distributions of total anaesthesia manpower, anaesthesiologists and nurse anaesthetists by state were analysed by multiple regression to account for their unevenness. Independent variables included prior professional contact in the state, professional satisfaction, practice income, demand for services, and environment. The distribution of training schemes accounted for 41 per cent of the variance in the distribution of total manpower, although 55 per cent was accounted for by the location of schools, number of operations and proportion of total state employment in service occupations. The results are discussed. The study has identified the location of training schemes as an important variable in the geographical distribution of manpower particularly in the case of anaesthesiologists for which almost two-thirds of the variance is accounted for by the residency schemes. Although the regression predicts that increasing the number of residency schemes in an underserved state should be associated with an increase in the number of anaesthesiologists, such a policy may not be feasible. The residency schemes would have to be matched by cancelling a greater number of schemes in relatively over-supplied states.

494. CALVERT, G. D. **Attracting and training more chemical pathologists in the United Kingdom.** *Journal of Clinical Pathology*, London, 1976, Dec., vol. 29, no. 12, pp. 1049-1053.

An attempt is made to define the function of the medical graduate in the clinical biochemistry laboratory and data on recruitment into clinical biochemistry in the United Kingdom is examined. If trainee pathologists were encouraged to become proficient in both a branch of clinical medicine and in research techniques, the resulting chemical pathologists should be able to improve the consultative and investigative functions of the laboratory. To this end some changes in the training regulations and in the role of the chemical pathologist are suggested.

495. SHAH, A. R. and FARROW, S. C. **Pre-registration house appointments: a computer aided allocation scheme.** *Medical Education*, Oxford, 1976, Nov., vol. 10, no. 6, 474-479.

The number of pre-registration house posts allocated by the London Hospital rapidly increased in 1973. Solution by hand of the allocation problem became time consuming and complex; consequently the operational research unit designed a computer-aided scheme for the allocations. Various alternative allocation methods are discussed and examples given. The method used is outlined and the results indicate that 60 to 70 per cent of applicants obtained one of their first three choices. Of the number of consultants who expressed a choice 72 to 94 per cent obtained one of their first three choices. The advantages of the allocation scheme are: (i) flexibility, allowing various weights to be given to either applicant or consultant; and (ii) it produces a complete solution which is optimal in terms of the numerical criteria specified.

NURSING STAFF

See also Abstract Nos. 493, 557, 604

496. HOUSE, V. G. **Problems facing the undergraduate nurse.** *Nursing Times*, London, 1976, Dec. 9, vol. 72, no. 49, pp. 1935-1936.

The graduate nurse has to face problems which stem from participating in two fundamentally different learning situations. There is an educational difference which results from the need to acquire practical nursing skills and the development of intellectual and social skills which is seen as a contrast between flexible and rigid attitudes. Intellectual development may require self-discipline and motivation from within in contrast to externally imposed controls in hospital which encourage uncritical acceptance of nursing practice. The problems of adjustment are discussed in the staff and ward situation and the social situation. The individual's ability to make the transition from one culture to the other may determine her persistence and success in nursing. It is recommended that there should be a greater study and knowledge of the adjustment problems involved.

497. MCFARLANE, J. K. **The role of research and the development of nursing theory.** *Journal of Advanced Nursing*, Oxford, 1976, Nov., vol. 1, no. 6, pp. 443-451.

The profession of nursing searches for a theoretical base for its practice, but there are problems inherent in defining the nature of concepts and in building them into

testable hypotheses and theories. Some concepts are derived from everyday experience, some from the conventional wisdom of the profession. The deductive method of developing concepts from related sciences and the inductive method based on nursing practice itself are considered. Although a few theories have been developed little has been developed at the prescriptive level. There is a need to isolate concepts from conventional professional wisdom, for factor isolating research, and for the testing of hypotheses against nursing practice.

498. AULD, M. G. **How many nurses? A method of estimating the requisite nursing establishment for a hospital.** London, Royal College of Nursing, 1976, 99pp. £1.50

This study based on extended observation of the work of nurses in a maternity hospital, provides a functional basis for the calculation of a nursing establishment. The calculations are based on individual patient needs within universally recognized disease categories, the incidence of which is known. There is therefore, unlike other methods, no subjective estimation required by nursing staff to place patients into categories; they are already there by virtue of disease classification. Other advantages of the method are: (i) it can be used in all types of hospital; (ii) much of the data would be transferable to other hospitals; (iii) additional data can readily be accommodated to provide greater accuracy and further refinement; and (iv) amendments can easily be made in the light of changed circumstances.

499. COOPER, C. L., LEWIS, B. L. and MOORES, B. **Personality profiles of long serving senior nurses: implications for recruitment and selection.** *International Journal of Nursing Studies*, Oxford, 1976, vol. 13, no. 4, pp. 251-257.

A long-term project at University of Manchester Institute of Science and Technology is concerned with examining the effectiveness of alternative methods used in the recruitment of student nurses. It is hoped that this work will help in the development of improved recruitment strategies. It was felt that there would be considerable value accruing from measuring the personality profiles of qualified and active nurses some years and several levels of seniority removed from their initial graduation. At a workshop devoted to the problems associated with securing the services of inactive nurses, the majority of the 66 female and 18 male senior nurses present agreed to complete a 16 Personality Factor Questionnaire. The results demonstrated that this particular group possessed personality profiles substantially different from (male and female) norms and from those obtained on studies of student nurses. These results must be seen as the first stage in a long series devoted to assessing the personality characteristics of nurses at different points in their careers. If any inference can be drawn from this, it will facilitate the development of an element of the scale labelled as suitability. This in turn could lead to the development of more effective recruiting campaigns.

500. LEWIS, B. R. and COOPER, C. L. **Personality measurement among nurses: a review.** *International Journal of Nursing Studies*, Oxford, 1976, vol. 13, no. 4, pp. 209-229.

The selection and wastage of nurse trainees are of prime importance and have been the subject of a considerable number of surveys and reports. The consensus is that

intellective factors (intelligence and academic/educational attainment), as measured by cognitive tests, do predict various factors of success but there is evidence that non-cognitive factors which pertain to personality also have some influence. Studies of the application of personality tests in student nurse selection are reviewed and some conclusions drawn. Sixty-six references to the literature are included.

501. HOUSE, V. and SIMS, A. **Teachers of nursing in the United Kingdom: a description of their attitudes.** *Journal of Advanced Nursing*, Oxford, 1976, Nov., vol. 1, no. 6, pp. 495-505.

A survey in which 2,923 registered teachers of nursing completed questionnaires produced 956 questionnaires on which teachers provided additional comment about their jobs. There was a common core of dissatisfaction, and concern was expressed about a perceived decline in the status of nurse teaching. The decline reduced the amount of control teachers had over the educational process—reducing numbers of teachers and the ability to provide direct teacher-learner contact. The clinical difficulties met in the wards are discussed in the light of the lack of appreciation of their role and inadequate orientation to ward teacher. Concern about career development, colleagues' attitudes, job satisfaction, tutors, status and control, senior tutors and principal tutors is discussed together with the lack of ability to plan and carry out an ordered sequence of educational experiences and control the total educational function. Possible changes in the future educational structure were viewed with caution as such changes were seen as needing increased resources.

502. WISEMAN, J. **A nursing audit of basic care, or nursing A.B.C.** *Nursing Times*, London, 1976, Dec. 2, vol. 72, no. 48, occasional papers, pp. 169-172; Dec. 9, vol. 72, no. 49, occasional papers, pp. 173-176.

The Blackpool Nursing Service Audit consists of check lists for the various grades of nursing staff and provides a means of self-examination whereby the holder of a nursing post, at any level, is helped critically to examine his or her activities within the working environment. Through regular self-appraisal the optimum potential of the individual and the organization can be achieved. The background to the audit is outlined. The implementation of the scheme and validation methods are discussed and the advantages and disadvantages considered. The audits have been designed as part of a total appraisal scheme and each audit document is complementary to the posts above and below. The whole culminates in a definition of objectives which provides the basis for an ongoing system of appraisal.

503. MILLINGTON, C. **The clinical nurse consultant specialty anaesthetic nursing.** *NATNews*, Matlock, 1976, Dec., vol. 13, no. 9, pp. 18-22.

A study to evaluate the need for a clinical nurse consultant in specialty anaesthetic nursing was carried out at six hospitals in Scotland, the Midlands and the South of England. The hypotheses tested were: (i) there is a need for the nurse in the anaesthetic area; (ii) there is a need for a personal link between patient and operating theatre; and (iii) that (i) and (ii) could not be undertaken by the theatre nursing officer as part of her role. The hypotheses were substantiated. In every case it was agreed there was a need for a nurse in the anaesthetic area who had completed a postgraduate course in anaesthetic nursing. The need for a personal link between patient and operating theatre

was discussed. The role of the clinical nurse consultant is outlined and the criteria that must be met before considering a job description are presented. It is envisaged that in the future, anaesthetic nurses will see all patients booked for surgery in the out-patient department. Patient and relative counselling sessions on the ward prior to surgery will become an accepted routine. In order to encourage nurses to follow a career in the operating theatre the role of the theatre nurse will have to be extended in this manner.

OTHER PROFESSIONAL AND TECHNICAL STAFF

See Abstract Nos. 563, 564

ORGANIZATION AND ADMINISTRATION

See also Abstract Nos. 502, 550, 553, 578

504. ALEXANDER, T., MONEY, W. and BEATZOGLOU, T. **Multihospital systems may offer solutions to delivery problems.** *Hospitals*, Chicago, 1976, Nov. 1, vol. 50, no. 21, pp. 73-76.

Hospitals in the United States are considering increasingly the possibility of combining their resources with those of other hospitals or with hospital management groups. The results of an evaluation of multihospital systems are presented. They can have a variety of organizational and structural characteristics and each combination of characteristics influences system effectiveness. A multihospital system achieves economies of scale in 'hotel' services because of their adaptability to labour-saving devices, high use of bulk-purchased supplies and low level of potential conflicts of interest in organizational change. The system appears to provide mechanisms for increased productivity or greater capital intensity and the strong emphasis on facility use and on cost control in multihospital systems may be encouraging doctors to adopt measures to reduce length of stay. The community at large is the primary economic beneficiary since the savings realized by the system are passed on to the patients. This evaluation of multihospital systems does not provide a specific answer about whether to participate or not, but reveals that the multihospital system approach is an alternative that begins to attack some of the long-standing problems in the delivery of health care services.

505. BROWN, M. and LEWIS, H. L. **Hospital management systems: multi-unit organization and delivery of health care.** Germantown, Md., Aspen Systems Corporation, 1976, xiii, 306pp. $17.50

It appears that the health care industry in the United States is rapidly evolving into a provider field that one day will be dominated by hospital systems. The primary purposes of this book are to: bring this trend to the attention of others; give the arguments for systems; explain the factors associated with systems development; and predict some changes that appear to be inevitable. The first four chapters deal with: forces for change; strategies for change; co-operation and sharing; and autonomous hospitals versus systems. The next nine chapters give brief details about many of the systems already in existence. The two final chapters discuss the performance and power of systems and the outlook for them.

506. MAILLARD, C. La direction par les objectifs à l'hôpital public: la délégation des pouvoirs. **[Management by objectives in public hospitals: the delegation of power.]** *Techniques Hospitalières*, Le Kremlin-Bicêtre, 1976, Dec., vol. 32, no. 375, pp. 41-48, 53-57; summaries in English, German, Spanish and Italian, p. 57.

The public hospital in France is still suffering from the bureaucratic heritage of the 19th century which induces 'apoplexy at the centre and paralysis at the extremities'. Power is concentrated in the hands of the director, and his subordinates play no part in decision-making and consequently take no initiatives. The director's hands are tied, however, by regulations which lay down procedures for recruitment, promotion, etc., and he has very little control over his subordinates and none at all over the medical staff. The author proposes that management by objectives be introduced together with delegation of responsibilities throughout the whole structure of the hospital. Those to whom power is delegated (administrators, directors of nursing, etc.) should participate in the definition of the policies and objectives of the institution, in selecting ways of attaining the objectives, and in evaluating the results. The dangers inherent in such a policy are discussed as are measures (staff training, definition of objectives, and *a posteriori* monitoring of performance) to counterbalance these dangers.

507. ROUSSEL, P. Le droit de conseil à l'hôpital. **[The right to counsel in the hospital.]** *Gestions Hospitalières*, Mantes, 1976, Nov., no. 160, pp. 899-903, 905-906.

Hospital organization has alongside its main decision-making bodies certain advisory bodies which can be of great importance. The consultant is omnipotent in his own department but has only an advisory role when the hospital's general policy is being decided. As a member of the consultative medical committee he represents his own department and cannot easily take an objective view when priorities as to the purchase of new medical equipment, for example, are being worked out. It would help if his training were to include some basic economics so that he would have some idea of what is meant by management analysis. The new post of director of nursing opens the way for better staff representation on the management team.

ECONOMICS OF HOSPITAL MANAGEMENT

See also Abstract Nos. 475, 504, 549, 568

508. NOËL, A. Analyse des besoins et identification des priorités en milieu hospitalier au Québec. **[Analysis of needs and identification of priorities in hospitals in Quebec.]** *Administration Hospitalière et Sociale*, Montréal, 1976, Oct./Nov., vol. 22, no. 8, pp. 13-19.

The author recommends the use of a global approach to the analysis of all the factors which affect hospital management. In a series of five diagrams he analyses: the interactions of resources, requirements, and constraints; basic objectives; and the steps to be used in analysing requirements—analysis of external factors (national trends, demographic changes, etc.), internal factors (type of patient, specialties, expansion), trends (role of the institution within the region), and alternative choices.

He exhorts hospital administrators to act positively and not confine themselves to reacting to events and pressures.

509. MAJNONI D'INTIGNANO, B. Les investissements hospitaliers. **[Investment in hospital services.]** Paris, Editions Médicales et Universitaires, 1976, 348pp. Fr. 120

The author emphasizes the need for economic study of hospital investment, in view of the economic importance of health and the increasing expenditure on hospital care, and seeks to provide a theoretical structure for aims and methods of investment, to analyse current practice and suggest solutions. She analyses the economic nature of hospital investment, distinguishing between investment relating to health and investment relating to management, criticizes current planning and shows how the present accounting system causes uneven distribution of funds between modern hospitals and hospitals in need of improvement. She studies methods of financing investment, the effects of competition between the public and private sectors, and hospital management. Finally, supported by a theoretical analysis of economic and social objectives, she proposes criteria for the choice of investment and suggests financial decentralization to encourage hospitals and Social Security to choose investments better suited to the needs of patients and the medical profession. The study includes a brief comparison with American and British methods and contains numerous tables and diagrams.

RUNNING COSTS

See Abstract No. 556

BED OCCUPANCY, ECONOMIC USE OF BEDS

See also Abstract No. 559

510. LAVE, J. R. and LEINHARDT, S. **An evaluation of a hospital stay regulatory mechanism.** *American Journal of Public Health*, Washington, 1976, Oct., vol. 66, no. 10, pp. 959-967.

The results of an evaluation of a predischarge utilization review programme [PDUR] for Medicaid patients are presented. Half the hospitals in Allegheny County, Penn., participated in PDUR on a voluntary basis which produced a natural quasi-experimental situation with some hospitals subject to the older post-discharge review systems while others had the new pre-discharge review system. In both the PDUR and non-PDUR hospitals the average length of stay of Medicaid patients decreased more than that for Blue Cross patients. The length of stay for Medicaid patients in PDUR hospitals fell more systematically than did that of Medicaid patients in non-PDUR hospitals, although there was no change in the rate of decrease after the introduction of PDUR. No differential effect of the PDUR review process could be demonstrated although the decline in length of stay was more continuous and smooth in those hospitals participating in PDUR. It is unclear whether PDUR is less expensive, more efficient or less deleterious than post-discharge review. The findings would have been less ambiguous and more detailed had an appropriately designed evaluation project been included from the start.

511. ERNST, C. and RETTIG, R. Modèle de dimensionnement des services d'hospitalisation. **[Model for estimating the extent of hospital services.]** *Gestions Hospitalières*, Mantes, 1976, Nov., no. 160, pp. 863-870.

A problem for hospital administrators is the maintenance of a balance between full use of resources and the provision of sufficient capacity to meet all requirements for admission. This is particularly true in very specialized units. The authors have devised a mathematical model which can be used to forecast the level of demand and to indicate how many additional beds may be needed at peak periods. The model includes six variables—number of beds, average length of stay, annual number of admissions, number of days per bed, occupational rate, and a failure index. The latter is the probability that requests for admission in excess of the number of beds permanently available will have to be turned down.

512. KOURIE, D. G. **A length of stay index to monitor efficiency of service to general surgery in-patients.** *Operational Research Quarterly*, Oxford, 1976, vol. 27, no. 4, pp. 959-970.

An index, based on patient length of stay has been designed for use in the regional monitoring system of health authorities in the National Health Service. The index, reflecting efficiency of service to general surgery patients, is based upon homogeneous patient groups defined in terms of Hospital Activity Analysis data. The groups and percentile norms of stay under full efficiency were established in consultation with doctors. The mathematical model and its application are discussed. The main features in the use of the index are discussed. The distribution of the index is exact and asymptotic and its use is illustrated for a sample of 12 hospitals and 70 groups of general surgery patients.

DATA PROCESSING

See also Abstract Nos. 476, 495, 515, 524, 560, 572, 573, 579

513. CASTMAN, B. and WENDEL, S. Nästa generation datasystem utformas. **[The next generation of data systems is taking shape.]** *Landstingens Tidskrift*, Stockholm, 1976, Dec., vol. 63, no. 14, pp. 36-40.

Full use of the facilities offered by computers demands more frequent access to terminals than is currently seen in offices. Kommun-Data, the Swedish local authorities' computer facility, took over responsibility for developing automatic data processing systems in Sweden at the beginning of 1976 and in the autumn started the ISS (local and county council information system structure) project, one of whose tasks is to draw up guidelines for the structure of future systems. The project is steered by a series of reference groups representing State and local authorities and organizations, and sub-groups responsible for individual projects. These include: (i) simplification of staff administration procedures; (ii) limitation of utility costs; (iii) patient administration—admissions, transfers, discharges and accounts; (iv) diagnostic X-ray; (v) computer hardware and software (programming systems); and (vi) communicability between data banks, and the necessary security precautions. The project is partially financed by a grant from STU, the Swedish Technological Development Board.

LIBRARIES

See also Abstract No. 467

514. KJERRSTRÖM, U. and POLLACK, L.-O. Det ljusnar (väl?) för sjukhusbiblioteken. **[Improving the hospital library.]** *Landstingens Tidskrift*, Stockholm, 1976, Dec., vol. 63, no. 14, pp. 24-27.

The Association of Swedish County Councils has recently published a report on the work and organization of hospital libraries [see *Hospital Abstracts*, vol. 17, Abstract 57]. The authors have two main criticisms of the recommended operation of hospital libraries, on qualifications and organization. The report states that a hospital library must be under the responsibility of a trained librarian but fails to lay down any standards for the staff taking books round the wards. Unless they are trained in selection and guidance they may advise unsuitable books for patients and be quite lost when asked for professional literature by staff. Furthermore, the authors disagree with the report's recommendation that the hospital library should co-operate with the local public library. In their view the hospital library service is part of the overall curative work of the hospital rather than a public lending service, and they wish the hospital library to be organized on the same principles and under the same administration as all other sectors of the life of the hospital. The hospital library system should operate as an independent unit, each county having its hospital library service free from all connection with the little local public libraries.

MEDICAL RECORDS

See also Abstract Nos. 574, 605

515. MASON, A. and JACKSON, N. V. **Accident and emergency records: precept and practice.** *Medical Record*, Truro, 1976, Nov., vol. 17, no. 4, pp. 195-204.

Traditional methods of maintaining medical records in the accident and emergency department have resulted in hospitals operating two separate medical records systems. The usual practice is to maintain two major records within the department: (i) an accident and emergency register; and (ii) a record card for clinical notes. Common problems encountered include: illegibility, incompleteness, fragmentation and lack of availability. The lack of adequate communication between hospital and general practitioners is also a source of misunderstanding and friction. A computer-based accident records system has been developed at the Accident Centre, Frenchay Hospital, Bristol. The system is outlined, together with the documentation, processing and feedback. The introduction of the system has meant a thorough reappraisal of the accident and emergency records system and improvements in efficiency.

LEGAL ASPECTS OF HOSPITAL ADMINISTRATION

516. WILLIAMS, B. **Occupiers' Liability Act 1957 and the liability of hospitals.** (Case Studies on Health Service Management Law and Practice, Volume 6) Beckenham, Ravenswood Publications, 1977, xi, 69pp. £6.00

This book deals fully with the liability of hospitals and health authorities in Great

Britain under the Occupiers' Liability Act 1957. The occupiers' rights and duties are examined in detail, with particular reference to case studies, in six chapters: introduction and statutory liability; statutory liability continued; defences; work done by independent contractors; children; and trespassers. The act is reproduced in full.

OTHER SPECIAL ASPECTS, COMMISSIONING

See Abstract No. 477

FINANCE AND ACCOUNTING

FINANCE

See also Abstract Nos. 458, 509, 581

517. FITSCHEN, F. **Look to ratios.** *Hospital Financial Management*, Chicago, 1976, Nov., vol. 30, no. 11, pp. 44-48, 50.

Standard financial ratios can be adapted to the hospital environment to provide management with a deeper and broader perspective of the financial health of the institution. This paper examines common financial ratios in the health care setting, indicates how these ratios can be used by management and suggests ways the ratio can be made more useful to management. Most of the 16 ratios here are adapted from standard ratios used in other industries, and were used in one hospital by the author. The ratios can be separated into five groups; solvency; relation of income and profits to tangible net worth, working capital and assets; collection period; inventory; and debts related to tangible net worth and working capital. Balance sheet and operating report data were obtained from nine hospitals and used to develop their ratios; those of one hospital are then analysed to illustrate their use.

518. KOZA, J. P. Réévaluation des bilans, rétablissements de la concurrence et financement des investissement hospitaliers. **[Reappraising the balance of accounts, re-establishing competition and financing of hospital investments.]** *Revue Hospitalière de France*, Paris, 1976, Nov., vol. 40, no. 295, pp. 1201-1206, 1209-1213, 1215-1218, 1220-1222, 1224-1226, 1228-1229, 1231, 1234, 1235.

A number of factors combine to make public hospitals in France uncompetitive. For example they pay a wage tax but not value added tax (VAT): private clinics pay VAT but not the wage tax. Since VAT on investment can be deducted from the total VAT due, private clinics are paying much less for their investment than are the public hospitals. Moreover, the public hospitals cannot use reducing-balance depreciation. Charges to patients have not been revised upwards to take account of staff salary increases and other measures and, as a result, essential investment has had to be postponed. The author discusses in detail a number of measures which could reduce the cost to the public hospital of raising money for investment. These are: replacement

of the wage tax by VAT; joint management of hospital finances and depreciation funds on a regional basis; optional payment of VAT; and the use of reducing-balance depreciation instead of straight-line depreciation.

519. BAUER, A. Ompröva sjukvårdens rodovisningssystem! **[Reviewing the health service accounting system.]** *Landstingens Tidskrift*, Stockholm, 1976, Dec., vol. 63, no. 14, pp. 45-50.

Spri has developed a cost and performance review (KPS) system to assist in the description, planning, budgeting and control of the performance of hospital departments, the application of which is now beginning. The system produces overall accounts and a monthly cost review, enabling administration rapidly to correct the results of rises in costs. Long-term changes in hospital costs depend on: (i) developments in medical science; (ii) rises in wage levels; and (iii) political decisions affecting the structure of the health service. Medical science eliminates some diseases and brings others within the range of therapy. Wage rises, partially offset by rationalization, are the main origin of rising health service costs. KPS provides monthly and annual information on costs in individual health institutions: it has no effect on advances in medical science, pay talks, or political decision-making, and thus cannot live up to the demand laid down at its inception—that it should be a tool to *control* the long-term evolution of the cost of the health services. The treatment provided in hospital is the end-product of a general practitioner's diagnosis and therapeutic decisions, these in their turn being the product of training, the state of the patient, and the bed situation. It ought to be made easier for doctors to appreciate the financial consequences of the diagnostic and therapeutic alternatives open to them. The review has no effect on these considerations, nor does it provide information of any relevance to medical decision-making. Far too much staff time is spent in hospital extracting computer-stored information of infinitesimal value: information frequently used to confirm impressions rather than reveal facts. The health service should concentrate on raising the standards of postgraduate medical training and instilling economico-critical thinking into medical decision-making.

CATERING, DIETETICS, KITCHENS

HOSPITAL CATERING

520. GASSER, W. Die Bedeutung der Küche aus der Sicht der Verwaltung. **[The importance of the kitchen from the point of view of management.]** *Veska*, Aarau, 1976, Dec., vol. 40, no. 12, pp. 606-609.

In this talk in a training course for hospital cooks a hospital administrator points out the importance for the patient of an efficient catering service. Efficiency is not only concerned with cost: it also covers quality and variety of meals and kitchen organization. Some of the factors which affect the catering service are discussed: these include the status of the head of the service, the organization of work, the expertise of the cooks, staff performance, food distribution, co-ordination between kitchen and nursing staff,

and food purchasing. As an example of a specific problem the cleaning of stewpans is discussed and the reasons for changing from manual cleaning to the purchase of a special machine outlined.

521. GATES, K. F. **Practical ways of reducing costs in the dietary department.** *Hospital Administration in Canada*, Don Mills, Ont., 1976, Dec., vol. 18, no. 12, pp. 21-22.

Various methods of reducing costs in hospital catering departments whilst still maintaining a high quality food service are discussed. Cost reducing relationships with other departments should be developed, especially with the personnel department, accounting and purchasing, medical records department, laundry, housekeeping and maintenance, laboratory and the administration, in order to achieve good inter-departmental communication. Specific aspects of cost reduction within the catering department discussed include: menu planning; purchasing; food production; and food service. Good management of the catering department can contribute a great deal to the hospital's overall efforts to maintain costs.

522. BUNCH, W. L., MATTHEWS, M. E. and MARTH, E. H. **Hospital chill food service systems: acceptability and microbiological characteristics of beef-soy loaves when processed according to system procedures.** *Journal of Food Science*, Chicago, 1976, Nov./Dec., vol. 41, no. 6, pp. 1273-1276.

A study was designed to investigate the acceptability and microbiological characteristics of beef-soy loaves when processed according to procedures representative of hospital chilled food service systems. Beef-soy loaves containing 25 per cent rehydrated textured soy crumbles and 75 per cent ground beef were baked to 60°C in a convection oven operating at 121 ±8°C; stored chilled at 5 ±3°C for 24, 48 or 72 hours; portioned; held chilled at 5 ±1°C for two hours and then heated in a microwave oven for 55 seconds to achieve an internal temperature of 80°C just before the products were evaluated by a consumer panel. Overall acceptability scores for the final product were almost identical, regardless of the length of chilled storage at 5 ±3°C. Visible bacteria remained in the centre of the product after the loaves were heated to 60°C, stored at 5 ±3°C for 24 to 72 hours, portioned, held chilled at 5 ±1°C for two hours and portions heated to 80°C.

523. KONCEL, J. A. **Planning pervades conversion to cook/chill system.** *Hospitals*, Chicago, 1976, Nov. 16, vol. 50, no. 22, pp. 87-90, 92.

Management consultants recommended that Good Samaritan Hospital, Dayton, Ohio, adopt in its new building a convenience food system decentralized into floor pantries where chilled food would be heated in microwave ovens. A dietary planning committee was formed to evaluate the recommendations and to plan their implementation. The committee outlined four main areas of investigation: the use of convenience foods, microwave technology, decentralized pantries and totally disposable tableware. It eventually recommended a cook/chill system because of the inability of convenience foods to provide adequate satisfaction. The committee was then kept in being to plan the implementation of the new system, details of which are given.

DIETETICS IN THE HOSPITAL

524. McConnell, F. G. and Wilson, A. **Computerised nutritional analysis in the dietetic department of a teaching hospital.** *Journal of Human Nutrition*, London, 1976, Dec., vol. 30, no. 6, pp. 405-413.

The Department of Dietetics, Royal Victoria Hospital, Belfast, implemented an automated system for analysing 200 recall daily diets, providing a two-day turnaround and which could easily be used by dietitians who possessed little or no computer knowledge. The system has now been in operation for over four years. The computerized system is outlined. The main analysis program will analyse any number of daily diets into 16 constituents and calculate mean daily nutrient intakes for each patient or all persons over any period of time. The application of the system for analysis of the results of a small survey is discussed. The survey indicates the type of study which can be easily and inexpensively carried out when a computer is available to perform the analysis.

KITCHENS

525. Great Britain. Department of Health and Social Security. **Safety at work.** (Health Service Catering Manual, Volume 5) London, D.H.S.S. Catering and Dietetic Branch, 1976, 29pp.

This booklet is intended to draw attention to the hazards in catering departments and to promote safe working methods. The first part deals with general matters and covers: introduction; statutory requirements; management responsibilities; employees' responsibilities; protection of customers, visitors and the public; and training. The second part deals with particular problems of personal safety, catering premises, edged tools and catering machinery. Also included are: an aide-memoire for catering managers; examples of check list and authority for use of machines; list of demonstration material available; and recommendations in connection with premises used for deep fat frying. Seventeen photographs are included.

HOSPITAL DOMESTIC MANAGEMENT

DOMESTIC WORK

526. **Rapid resoil: a health care carpet appearance problem.** *Hospital Administration in Canada*, Don Mills, Ont., 1976, Dec., vol. 18, no. 12, pp. 24-25.

Tests on carpets revealed that three out of four of the detergents used left a sticky residue on the fibres that attracted soil particulates, causing the carpet to resoil quickly after shampooing. The more hospital carpet is shampooed with a detergent that leaves a sticky residue, the heavier the concentration becomes after successive shampooings causing the carpet to resoil more and more quickly. In the tests a special low-resoil detergent, used with a reel-type machine with simultaneous vacuum pick-up, had the lowest resoil factor (60.3 per cent) and the highest return towards original appearance (86.4 per cent). The tests show that low-resoil detergents can save time and money by extending the period between shampooing and can sustain higher carpet appearance for the life the carpet.

HYGIENE IN THE HOSPITAL

HOSPITAL INFECTIONS

See also Abstract Nos. 489, 491, 532-534

527. SHANSON, D. C., KENSIT, J. G. and DUKE, R. **Outbreak of hospital infection with a strain of *Staphylococcus aureus* resistant to gentamicin and methicillin.** *Lancet*, London, 1976, Dec. 18, vol. ii, pp. 1347-1348.

A previously unreported strain of *Staphyloccocus aureus*, resistant to both gentamicin and methicillin, as well as other antibiotics, caused an outbreak of infection involving 17 patients and eight staff in three hospitals and a convalescent home in London. The origin of the new strain is unclear, and the ability of the organism to spread in this outbreak may be due more to the fact that it belonged to a group III phage type and was methicillin resistant than to its gentamicin resistance. A feature of the outbreak was the persistence of infection in wounds and the long period between the time of contamination and subsequent pus formation. The epidemic strain was eliminated by the use of strict measures for the control of infection.

528. LINTZ, D. and others. **Nosocomial *Salmonella* epidemic.** *Archives of Internal Medicine*, Chicago, 1976, Sept., vol. 136, no. 9, pp. 968-973.

A patient admitted to New Jersey Medical School Hospital with diarrhoea due to *Salmonella heidelberg* subsequently developed fatal disseminated salmonellosis despite antimicrobial treatment. Five weeks after the patient's death nine patients developed *S. heidelberg* infections acquired during their stay in hospital. The infections were characterized by diarrhoea and bacteraemia. The strains showed substantial resistance to chloramphenicol, ampicillin and gentamicin. Two members of staff were revealed as asymptomatic excretors of the bacteria. Measures taken to halt the epidemic are discussed; no contamination of objects or reservoirs was discovered. The epidemic ended after an extensive handwashing campaign and isolation procedures were established. The clinical manifestations are discussed; the prolonged length of time between the death of the first patient and the appearance of the infection, its resistance to antibiotics and the high fatality rate are of particular interest. It appears that in the future control of epidemics will be more dependent on classic communicable disease intervention techniques than on an extensive range of pharmacological agents.

529. NELSON, J. D., DILLON, H. C. and HOWARD, J. B. **A prolonged nursery epidemic associated with a newly recognized type of group A streptococcus.** *Journal of Pediatrics*, St. Louis, 1976, Nov., vol. 89, no. 5, pp. 792-796.

During a six-month period 69 infants in the newborn nursery at Parkland Memorial Hospital were colonized with group A streptococci. Fifty-one had omphalitis, two infected circumcision wounds, and one each had meningitis, primary peritonitis and conjunctivitis; 13 infants were asymptomatically colonized. Existence of the problem was not recognized for three months and control of the epidemic was difficult. Benzathine penicillin prophylaxis to all infants suppressed active infection, but did not eradicate asymptomatic colonization of the umbilical cord. Triple dye treatment of

the umbilical cord plus benzathine prophylaxis eradicated the infection from the nursery. The epidemic streptococcus was a newly recognized 'skin strain' provisional type strain 5656-S, not previously known to cause epidemic disease or serious systemic infections.

530. RIBEIRO, C. D., DAVIS, P. and JONES, D. M. ***Citrobacter koseri* meningitis in a special care baby unit.** *Journal of Clinical Pathology*, London, 1976, Dec., vol. 29, no. 12, pp. 1094-1096.

Over a period of one year 65 babies in a special care baby unit were found to be infected with a particular serotype of *Citrobacter koseri*. The three cases of meningitis due to *C. koseri* which occurred are described. The organism showed a high capacity for spread among the babies on the unit and although the intestinal carriage rate was high, the clinical case:carrier rate was low. Spread was presumably by the faecal-oral route and, although the mode of transmission was not apparent, the possibility of some limited air spread would appear to be indicated by the positive settle plate. The spread of the organism was eventually controlled by the continued policy of isolation.

531. MENDIS, N. M. P. and others. **Protracted infection with *Salmonella bareilly* in a maternity hospital.** *Journal of Tropical Medicine and Hygiene*, London, 1976, July, vol. 79, no. 7, pp. 142-150.

The maternity hospital in Colombo, Sri Lanka, deals with 800 to 900 deliveries each month in five different labour rooms. An outbreak of *Salmonella bareilly* affected the premature babies who all suffered from gastro-enteritis. Investigations revealed that infection was widespread throughout the hospital and that there was a large number of asymptomatic excretors among healthy babies as well as the staff. Organisms were isolated from sinks, scales, milk bottle teats and prepared milk. The contamination was further associated with the water supply and was probably spread through the piped water supply contaminated as a result of suction of waste water into the water mains. The organism grew in the interior of the water taps in that area in contact with the atmosphere and also in the walls of water tanks at the water level. When the plumbing defect was rectified the organism disappeared from the taps. All tanks were disinfected and no subsequent infection occurred. The infection control methods used are discussed.

SOURCES OF INFECTION

532. BAIRD, R. M., ELHAG, K. M., and SHAW, E. J. ***Pseudomonas thomasii* in a hospital distilled-water supply.** *Journal of Medical Microbiology*, Harlow, 1976, Nov., vol. 9, no. 4, pp. 493-495.

An outbreak of infection affecting 40 patients was found to be due to contamination of intravenous fluids with *Pseudomonas thomasii* [see *Hospital Abstracts*, Vol. 12, Abstract 1305]. The source of the outbreak was traced to the pharmacy-purified water that had been used to spray cool fluids after sterilization. During a check on the distilled water supply system in the pharmacy at this hospital, *P. aeruginosa* was isolated from the distilled water. This paper records the findings of the subsequent investigation and points again to the need for constant vigilance in the preparation of pharmaceutical products.

533. HOLMES, C. J. and ALLWOOD, M. C. **Intravenous infusion bottle plugs as a source of microbial contamination.** *Journal of Hygiene*, London, 1976, Dec., vol. 77, no. 3, pp. 315-320.

A technique for the artificial contamination of the upper surface of intravenous infusion container plugs with viable micro-organisms was used to assess the adequacy of decontamination of two designs of plug by the use of antiseptic swabbing. The bacterial suspensions used were *Staphyloccocus epidermidis* NCTC 651B and *Bacillus megeratium* ACTC 8245. Two types of plug (MRC infusion bottle plug BS.2463 and the plug from infusion bottles suppled by Travenol Laboratories) were sterilized and swabbed. The results revealed that the MRC surface was more difficult to sterilize than that of the Travenol plug. The possibility of contamination of the infusion fluid during insertion of the giving-set was examined. The validity of swabbing bottle plugs with germicide before the setting-up of intravenous therapy systems is confirmed. However, residual viable organisms may be introduced to the fluid from the administration-set part of the MRC plug if swabbing is inadequate, which can pose a problem of contamination.

534. IP, H. M. H. and others. **Neonatal infection due to *Salmonella worthington* transmitted by a delivery-room suction apparatus.** *Journal of Hygiene*, London, 1976, Dec., vol. 77, no. 3, pp. 307-314.

An outbreak of diarrhoea due to *Salmonella worthington* occurred in five newborn babies in the nursery of a maternity unit of Queen Mary Hospital, Hong Kong, five weeks after a similar outbreak in 13 babies for which no cause has been found. The source of infection was traced to the contaminated rubber tubing of a mechanical suction apparatus. *S. worthington* was isolated from the rubber tubing and the Y connection of the suction apparatus from which all the five infected babies had received suction. Two experiments were carried out to test the source of *S. worthington*: (i) culture of *S. worthington* in the liquor; and (ii) reflux of aspirated material to the sterile suction catheter. The results indicated that reflux of contaminated amniotic fluid into the sterile catheter connected to the apparatus some time before use could have been the means of introducing the infected material to the babies and amniotic fluid acting as a good medium to support the growth of *S. worthington* might be responsible for the long-lasting contamination.

PREVENTION AND CONTROL

See also Abstract No. 489

535. HAXHE, J. J. Fonctionnement et organisation d'un comité d'hygiène hospitalière. **[Function and organization of a hospital hygiene committee.]** *Hospitalia*, Bruxelles, 1976, vol. 20, no. 3, pp. 113-117.

The increased incidence of cross infection has led to the establishment of hygiene committees in Belgian hospitals. Membership of the committee must include the director, the doctor who acts as his technical adviser, pharmacist, head of the bacteriology laboratory, director of nursing, and three doctors. The committee's duties include supervision of nursing techniques, methods of isolating patients with contagious

diseases, formulation of regulations relating to cleaning, research on sources of infection, establishment of standard procedures for reporting cases of infection, and staff training. The author describes his experience as member of the hygiene committee at Louvain University Hospital, and suggests topics for discussion at a first meeting of a new committee.

536. STANLEY, D. P. **A new concept in footborne contamination control.** *Journal of the Society of Environmental Engineers*, London, 1976, Dec., vol. 15, no. 4, pp. 17-19.

Little advance has been made in the control of footborne contamination. The majority of methods can be divided into four classes: (i) removal of contaminated footwear, or the use of overshoes; (ii) impregnated rugs; (iii) brushing the footwear, with or without the use of vacuum; and (iv) cassettes containing disposable sticky mats. A combination of these methods has been used until recently; the problems that users have experienced are outlined. The criteria required for an effective method of footborne contamination control are discussed. The Dycem Contamination Screen has been developed from specially formulated high-friction plastic material using these criteria. It provides an effective trap for all dust and contamination, and requires no frame. The efficiency of the screens has been tested and the product is widely used in many hospitals as well as industrial and commercial areas.

537. RICE, W. W. and DARR, K. **Infection control: beyond surveillance and recordkeeping.** *Hospital Progress*, St. Louis, 1976, Nov., vol. 57, no. 11, pp. 82-85, 104.

The first part of this paper reviews the literature on infection control committees. The second reports a survey of infection control practices in 12 hospitals with less than 400 beds and located in non-metropolitan areas with populations of less than 40,000. The survey covered basic committee structure, committee authority and committee functions. The greatest strength in infection control activities in these hospitals was the administrator's support of them. Weaknesses included: narrow scope of activities; lack of written policies; failure to use a nurse epidemiologist or other specially trained person; and lack of first-line infection control responsibility. A number of these problems could be solved by careful selection of committee membership.

HYGIENE IN THE OPERATING THEATRE

See Abstract No. 536

STERILIZATION

538. CASSIERE, J.-P., CERTAIN, B. and RENAUX, I. La feuille de stérilisation appliquée aux procédés par l'oxyde d'ethylene. **[Notes on procedures for sterilization by ethylene oxide.]** *Gestions Hospitalières*, Mantes, 1976, Nov., no. 160, pp. 889-892, 895-897.

Because ethylene oxide sterilization is potentially dangerous, the various procedures must be carried out with precision and care. The authors have therefore devised

instruction sheets which describe the different procedures (e.g. load sterilizer, close pump valve, rinse, store). The sheets must be signed at various stages of the procedure by the operator in the sterilizing unit; there is a separate sheet for each batch. 'Not checked; do not use' labels and labels requesting toxicological and bacteriological checks, and for stock orders are also used.

539. EVERALL, P. H. and MORRIS, C. A. **Failure to sterilize in plastic bags.** *Journal of Clinical Pathology*, London, 1976, Dec., vol. 29, no. 12, p. 1132.

Plastic bags are being sold as being suitable for the sterilization of discarded plastic petri dishes and other containers, with the recommendation that they should be only loosely tied. In the course of routine surveillance of laboratory autoclave loads it was noted that plastic bags frequently performed very badly, as judged by thermocouple measurements. Further tests to investigate the problem produced evidence that all-plastic (as distinct from composite paper and plastic) bags are often unsuitable because of the slow penetration of steam into them. It is recommended therefore that all-plastic bags should be used with great caution.

AIR HYGIENE

See Abstract No. 561

DISPOSAL OF WASTE

540. GERHARDT, E. Om affaldshåndtering på sygehuse. **[Refuse disposal in the hospital.]** *Tidsskrift for danske Sygehuse*, København, 1976, Nov./Dec., vol. 52, pp. 205-210.

Hospital refuse is divided into three categories, which must be packed and handled separately: (a) ordinary rubbish, including sharp objects; (b) pathological and infected items: and (c) builders' and garden refuse, plus occasionally paper and kitchen waste. Categories (a) and (b) together amount to some four kg. per bed-day, category (a) comprising 98 per cent of the total. Refuse other than sharp objects is collected in plastic bags; sharp objects are collected in plastic buckets. The bags are collected in the ward sluice or refuse room. Staff training and discipline are very important here. Vertical transport is usually by refuse shaft to the basement: horizontal transport is on trailers pulled by a small electric truck. The trucks have an average life of seven years and the two required take half an hour's maintenance a week. Refuse transport employs five men in an 850-bed hospital: the number can never be less than two or three. An institution requires rooms for the temporary storage of the various categories of refuse: these can be separate buildings at large hospitals, or a mere side-room off a small ward. The density of the ordinary rubbish is about 0.1 kg./l. and of pathological and infectious refuse 0.6 kg./l. In larger institutions, where there are compressors, category (a) and (c) rubbish is compressed in 13 cu.m. steel containers and driven to the district central heating supply incinerators. Category (b) refuse arising in Copenhagen is burnt at 800 to 850°C in a manually fed furnace constructed for the purpose at Bispebjerg Hospital. The empty plastic bins are cleansed in an automatic washer. Four photographs of satisfactory and unsatisfactory refuse handling are included.

541. HANSEN, L. and HANSEN, Å. Forbränding af hospitalsaffald. **[Incineration of hospital waste.]** *Tidsskrift for danske Sygehuse*, København, 1976, Nov./Dec., vol. 52, pp. 211-216.

The average amount of refuse produced is from three to four kg. per bed-day in Denmark, compared with 14 kg. bed-day in the United States. Most hospital refuse resembles ordinary household refuse, with an effective combustion value from 4,000 to 13,500 KJ/kg. (average 12,500 KJ/kg.). An incinerator must be capable of burning unsorted refuse in unopened bags to a guaranteed high standard. In addition, pathological and microbiological refuse, which may comprise up to 20 per cent of the volume arising from large (specialized) hospitals, must be wholly combustible in a controlled manner. Effective incineration demands the correct temperature, time of combustion, and volume and supply of air. Air must be supplied in sufficient quantities to support combustion without cooling the firebox. The exhaust gases must remain at a temperature of at least 800°C for at least half a second for full combustion, and the temperature must not exceed 1,100°C during final combustion. A typical household refuse incinerator comprises a refuse silo, a furnace with a grid for drying the refuse prior to combustion, boilers for using the heat energy produced, an ash separator and a chimney. A hospital incinerator must have a closed base instead of a grid; an oil-fired after-burner must be added to the conventional features in order to ensure full combustion. Construction, emission, sampling and disposal of ash are all covered by government environmental regulations. The staff must be highly trained and rigorous in their operation and maintenance of the furnaces. Four diagrams of incinerators are included.

542. 'Neuero' pneumatisch afval-transportsysteem. **['Neuero' pneumatic waste transport system.]** *Technische Gids voor Ziekenhuis en Instelling*, Amsterdam, 1976, Dec. 7, vol. 45, no. 1116, pp. 763, 765.

In this system, already being successfully applied on some 15 large projects in Germany, all waste from a building is thrown down a chute, at the end of which is a grinder. At a certain load the waste enters the grinder, where it is reduced to approximately 20 per cent of its volume. It is then sucked through 150 to 210 mm. wide steel pipes over distances up to 1500 m. into a strong-walled container, from which it can be collected by the refuse collection service. By an ingenious separation system the transport air is sucked from the container to a ventilator, from where it is blown into the open through grids or through a charcoal filter to eliminate smells. Air pressure in the container is kept low. Several buildings can be connected to the same system. Containers have flexible pipes with snap-locks for quick changing by hand but they can also be automatically changed. The system is clean, adaptable, labour- and space-saving, with low transport and storage costs. Investment costs are considerable, but the system can be hired. The paper includes a detailed diagram and a photograph.

SAFETY MEASURES

ACCIDENTS, GENERALLY

See also Abstract No. 525

543. SCOTT, C. J. **Accidents in hospital with special reference to old people.** *Health Bulletin*, Edinburgh, 1976, Nov., vol. 34, no. 6, pp. 330-335.

The majority of accidents to patients in hospital are recorded on 'accident' or

'incident' forms, which list witnesses, record details of injury, and possible responsibility. A study of these forms was carried out to assess whether useful clinical and preventive information can be gained with particular reference to elderly patients. The results revealed that accidents were most frequent in wards containing the greatest proportion of acutely ill elderly patients and least frequent in those wards with few or no old people. The time of accidents, precipitating factors, disease disability and drugs, activity attempts and results of the accidents are discussed. The situation of greatest risk appears to be the toilet or commode. The study revealed the absence of medical examination directed towards finding causes of falls, as opposed to detecting injuries sustained. A safe environment may reduce the need for supervision and the risk of falls. Care should also be taken to ensure that patients wear suitable footwear, not slippers.

ELECTRICAL ACCIDENTS

544. BUCHSBAUM, W. H. and GOLDSMITH, B. **Electrical safety in the hospital.** Oradell, N.J., Medical Economics Co., 1975, 111pp. $7.95

This book has been written in non-technical language so that it can be understood by all members of the health care team. The first few chapters give an insight into the fundamentals of electrical hazards and the means of eliminating them. Chapters then deal with: electricity from the human body; cardiac monitoring; electricity as therapy; cardiac pacemakers; caring for electrically sensitive patients; safety in critical care areas; and treating electrical accident victims. Numerous diagrams are included.

545. BRISCOE, C. E., HILL, D. W. and PAYNE, J. P. **Inflammable antiseptics and theatre fires.** *British Journal of Surgery*, Bristol, 1976, Dec., vol. 63, no. 12, pp. 981-983.

An investigation was carried out under simulated conditions to discover whether theatre fires could be started by the antiseptic painted on the patients' skin being ignited by cautery or diathermy. The methods used in the experiment are discussed. The results revealed that hot wire cautery or diathermy generated enough heat to ignite all alcohol-based antiseptics even if these contained as little as 20 per cent alcohol. They also cause iodine to explode in the presence of nitrous oxide and nobecutane to explode in the presence of nitrous oxide or increased oxygen. The possibility of these combinations causing fires is discussed. It is recommended that when diathermy or cautery is to be used near the surface of the body, either an aqueous-based antiseptic is used or if spirit solutions are required they are carefully dried off before proceeding.

ACCIDENTS IN GAS AND DRUG ADMINISTRATION

546. PEREL, A., MAHLER, Y. and DAVIDSON, J. T. **Combustion of a nasal catheter carrying oxygen.** *Anesthesiology*, Philadelphia, 1976, Dec., vol. 45, no. 6, pp. 666-667.

Fires and explosions associated with inflammable anaesthetics in hospitals are most frequently produced by electrosurgical equipment and static electricity coming into contact. The case of a patient receiving oxygen therapy at Hadassah University

Hospital, Jerusalem, who awoke to find the catheter aflame is discussed. It is assumed that the accumulation of static charges in the patient's bed due to weather conditions resulted in the patient's body becoming charged with static electricity. The nasal catheter served as an effective conductor to the grounded oxygen outlet. The difference between electrical potentials provided the circumstances for the generation of a spark which led to the ignition of the plastic material in the oxygen-enriched atmosphere. It is recommended that simple antistatic precautions should be adopted when oxygen therapy is applied in combustible atmospheres.

RADIATION HAZARDS

547. BUTLER, M. J. and ORCHARD, P. G. **Over-exposure of a service engineer in a hospital.** *Radiological Protection Bulletin*, Didcot, 1976, Oct., no. 17, pp. 36-38.

An incident involving the over-exposure of a service engineer to the cobalt-60 source in the teletherapy equipment installed in a hospital is discussed. The lessons drawn from the incident reveal that there is a need for engineering safeguards when kilocurie sources are involved. The need to recognize immediately that something has gone wrong is also emphasized. A person who is not involved in the actual source transfer should monitor the whole operation with a dose rate meter and check the duration. The physicist is most appropriate for this job and he should have the authority to suspend the transfer operation if necessary. The medical and dental code of practice does not at present contain any regulations for such operations but in view of this incident general protocol for source changing would be invaluable.

548. ZERLETT, G. Die Durchführung der neuen Strahlenschutzverordnung im Krankenhaus. **[Implementation of the new radiation protection regulations in hospitals.]** *Krankenhaus*, Stuttgart, 1976, Dec., vol. 68, no. 12, pp. 419-432.

The new West German Radiation Protection Regulations, promulgated on 13 October 1976, came into force on 1 April 1977. They revise West German legislation in this field to bring them into line with the current European Atomic Energy Community regulations. The provisions, with particular reference to hospital requirements, are set out and discussed in detail.

THE PATIENT

ADMISSION AND RECEPTION

See also Abstract Nos. 589, 603

549. DURBRIDGE, T. C. and others. **An evaluation of multiphasic screening on admission to hospital.** Canberra, National Health and Medical Research Council, 1975, 136pp.

This study was designed to find out if there were benefits, in terms of in-patient progress and hospital costs, from multiphasic screening on admission to a large general hospital, the Royal Adelaide Hospital. The study involved 1,500 patients who were assigned randomly to one of three equal groups: (i) screening carried out and the

results sent at once to the attending clinician; (ii) screening carried out but results withheld; and (iii) no screening carried out. Comparison of the patients in the three groups showed that they were initially similar. The cost of investigations for the screening groups was A$40 higher than for the control group; other aspects of hospital costs studied showed no significant or substantial differences between the groups. There were no significant differences between the groups in mortality, in a variety of indices of morbidity, disability, distress and dissatisfaction, or in length of stay. No measures of medical opinion about the progress of patients showed any advantage for the test groups. Under the conditions of this study multiphasic screening on admission increased costs without associated evidence of benefit to the patient.

WELFARE OF THE PATIENT

See also Abstract Nos. 555, 580, 584, 599

550. BRACKE-DEFEVER, M. Ziekenhuis: organisatiestructuur en humanisering. Enkele beschouwingen. **[The hospital: organizational structure and humanization. Some comments.]** *Acta Hospitalia*, Leuven, 1976, vol. 16, no. 3, pp. 223-235; summaries in French and English, pp. 235-237.

In modern society large-scale organizations are needed for efficient production of goods and large-scale hospitals for efficient provision of medical treatment. At the same time these large structures, though providing material comforts, tend to isolate people as human beings. Movements are developing to improve human relations within these structures. A hospital, a non-profit-making concern, is influenced by two dimensions: (i) growing changes in society and health care requiring efficient organization; and (ii) the organizational structure creating conditions which conflict with the primary aims of health care. Discussed are the definition of 'organization', the relationship between professionalism and growing bureaucracy, changing attitudes towards illness, health and patients, changing pattern of morbidity and expectations, and changing patterns of life. Material improvements for the patients, and talks often suggestive of disguised psychiatry, are only of superficial value in solving the problems of de-personalization. What is needed is a change in the structure whereby the solving of patients' problems and the development of more personalized relations between the patient and those attending him become an accompanying and integral part of the organization.

551. LENZI, G. Il contributo dei tecnici ospedalieri per l'umanizzazione dell'assistenza. **[The contribution of hospital technology to the humanization of care.]** *Ospedali d'Italia*, Roma, 1976, Oct., vol. 13, no. 10, pp. 51-59.

The patient will feel happier in hospital if he is given a friendly welcome, a clean and comfortable bed, hot meals, good lighting in his room, and the opportunity to see his family and friends as often as he wishes. Very few patients require single rooms.

552. TRESCHER, J. Quelques réflexions à propos de l'humanisation des hôpitaux. **[Some reflections concerning the humanization of hospitals.]** *Gestions Hospitalières*, Mantes, 1976, Nov., no. 160, pp. 857-860.

The new patient should not be overwhelmed by a series of forms to complete. Only the seriously ill patient needs a single room, and, in general, three- or four-bed

rooms are best. Each room should have its own WC and washbasin. The patient will feel more independent if he can alter his position in bed by himself (i.e. if his bed has an auxiliary motor attachment). Many patients are mobile and they should be allowed to have their meals in the hospital restaurant. Visitors, books, radio, television, and occupational therapy all have a role in treatment.

553. AMERICAN HOSPITAL ASSOCIATION. **Auxiliary gift and coffee shop management.** Chicago, American Hospital Association, 1976, vii, 136pp.

This manual sets forth general principles of management consistent with the role expected of shops organized by voluntary workers in hospitals. The gift shop and coffee shop are dealt with separately. Particular emphasis is placed on financial management and accountability and numerous examples of records and forms are reproduced.

VOLUNTARY SERVICE, VOLUNTARY WORKERS

See Abstract Nos. 553, 588

HOSPITAL SOCIAL WORK

554. SOCIETY FOR SOCIAL WORK DIRECTORS. **Social work staff development for health care.** Chicago, American Hospital Association, 1976, v, 27pp. $5.75

This booklet discusses staff development as a concept, as a component of administration, as a composite of knowledge and skills, and as a dynamic process. The administrative considerations are also discussed. Appendices include models of staff development programmes, social work department policy statement and bibliography.

THE GENERAL PRACTITIONER AND HIS PATIENTS

See also Abstract No. 592

555. MELKER, R. A. de. **The family of the hospital patient, a unit at risk.** *Allgemeinmedizin International General Practice*, Dortmund, 1976, no. 4, pp. 172-174.

The most fundamental and specific part of the general practitioner's job in the hospital is his opportunity for bridging the gap between home and hospital. The effects of admission to hospital on the patient's family receive too little attention. In the Netherlands a general practitioner is not accustomed to treating patients in hospital. This paper is concerned with the specific, complementary task mentioned above. A case history is given to illustrate this role. In order to carry out this function the general practitioner undertakes the following tasks: (i) regular, preferably weekly visits to his patients in hospital; (ii) maintaining contacts with the family; (iii) co-operating closely with the other workers in domiciliary care; and (iv) keeping in contact with the consultant, especially with seriously ill patients.

HOSPITAL CARE

See also Abstract Nos. 473, 497, 502, 587, 593, 606

556. BRUCKENBERGER, E. Kostensenkung durch Erhöhung der Komplexität im Gesundheitswesen: Lösung durch Schaffung neuer Systeme? **[Cost reduction through increased complexity in the health service: solution by creating a new system?]** *Krankenhaus*, Stuttgart, 1976, Dec., vol. 68, no. 12, pp. 407-418.

The tendency in Western Germany towards increasing central control and standardization of hospitals and hospital planning, with an eye to cost reduction, is critically examined in its relation to the introduction of new concepts of patient care. Fundamental changes in reorganization, necessitated by a new concept, bring with them a number of problems affecting labour relations, management and space needs. One of the difficulties is the lack of precise definition of the basic terms used. This is illustrated by a detailed examination of a number of proposals, by various bodies and by individual hospitals, for the setting up of what are called 'after-care clinics'. These are special light or minimal care departments for those not (or no longer) requiring the facilities of an acute ward but who need to be admitted to, or remain in, hospital. The proposals vary considerably in scope and aims and it is evident that the lack of clear definition of such terms as 'chronic sick', 'long-stay patient', 'after-care' and 'some in-patient care' causes confusion. Other factors to be considered in planning these 'after-care clinics' (e.g., bed allocation for specialties, the need for dining-rooms and day-rooms, and staff consultation) are also discussed.

557. FROEBE, D. J. and BAIN, R. J. **Quality assurance programs and controls in nursing.** St. Louis, Mosby, 1976, xi, 161pp. £5.00

This book was prepared specifically as a guide to the development of quality assurance programmes and controls for those administering nursing services. Systems and management science concepts are shown to form the basis for the subsequent development of quality assurance programmes and controls. The specific programme chosen for elaboration includes histories, problem-oriented records, rounds, plans of care, audit and client evaluation. Organizational analysis, leadership and motivation are discussed as controls that may be used in formulating a programme. The future state of the nursing discipline is forecast in the concluding chapter.

558. EGDAHL, R. H. and GERTMAN, P. M., editors. **Quality assurance in health care.** Germantown, Md., Aspen Systems Corporation, 1976, xxi, 356pp. $19.75

In November 1975 a seminar on quality assurance was held in Boston by the Boston University Program on Public Policy for Quality Health Care. To provide the participants with a common ground for discussion and debate, 14 background papers were prepared and distributed in advance of the meeting. The papers form the core of this volume. The policy recommendations emanating from the meeting are also included, together with a bibliography.

559. JACK, M. C. **Hospital quality review can outdo PSRO external review systems.** *Hospitals*, Chicago, 1976, Nov. 16. vol. 50, no. 22, pp. 65-68.

This paper discusses whether an internally controlled quality review system or an externally controlled system provides the best feedback to a hospital, as well as which system can be integrated most effectively with a hospital's system of patient care. In June 1973 Sacramento Medical Center of the University of California, Davis,

initiated internally controlled systems for evaluating the appropriateness of patient placement and of services provided. Evaluation of patient care is carried out on a retrospective basis via a departmental patient care evaluation system and evaluation of patient placement on prospective, concurrent and retrospective bases via a utilization review system. The process followed is common to both systems and consists of eight steps which are outlined. This approach to monitoring care has proved to be very effective and shows that hospitals have advantages of knowledge, interest and speed in reviewing care, managing problems, and effecting change.

HOME CARE, AFTER-CARE

See Abstract Nos. 556, 586

SPECIAL DEPARTMENTS

560. NICHOLSON, J. P., editor. **Scientific aids in hospital diagnosis.** New York & London, Plenum, 1976, x, 286pp. £15.75

This volume contains the proceedings of a conference held at Oxford in April 1975 and organized on inter-disciplinary lines by the United Kingdom Liaison Committee for Services allied to Medicine and Biology. The papers are arranged in six sections: investigations in pathology; radiation diagnostics; new diagnostic techniques in special departments; clinical measurements in wards; co-ordination and communication of results; and ergonomic contributions to medical diagnosis. The papers deal with the means of initiating sophisticated diagnostic techniques, including the co-ordination of computer services between hospitals, and the problems of maximizing the use of existing instruments and techniques.

WARDS

See Abstract Nos. 473, 551, 566

OPERATING SUITES

See also Abstract No. 545

561. PIZIALI, R. L. and others. **Distribution of waste anesthetic gases in the operating room air.** *Anesthesiology*, Philadelphia, 1976, Nov., vol. 45, no. 5, pp. 487-494.

Efforts to reduce exposure of staff to anaesthetic gases require an understanding of the distribution of waste gases in the operating theatre air. Concentrations of nitrous oxide and halothane were measured at numerous stations throughout an operating theatre and a delivery room in the absence of staff. Air-conditioning flow rates and flow patterns were varied, as was the height of the anaesthetic gas source. Air flow patterns were found to dominate the anaesthetic gas distribution, while buoyancy effects were negligible. Venting waste gases at the floor does not significantly reduce

exposure of staff. Areas of high concentration were observed: their occurrences and locations varied strongly with air flow patterns. The exhaust grille is the best location for a single measurement of the average concentration. Recirculating air-conditioning systems reduce energy costs; however, only the non-recirculating portion of the air-exchanges reduces waste gas concentration.

ANAESTHESIA

See Abstract Nos. 468, 493, 503

PHARMACY

562. Biggs, M. **Pharmaceutical problems in small hospitals.** *Australian Journal of Hospital Pharmacy*, Prahran, Vic., 1976, vol. 6, no. 3, pp. 101-103.

A survey of pharmaceutical problems which may occur in small hospitals in Australia was carried out in Queensland, New South Wales, Victoria, Tasmania and South Australia. Questionnaires revealed that hospitals which employed either no pharmacist, a part-time pharmacist, or one pharmacist varied in size from 70 to 150 beds and were mainly in rural areas. Pharmacists often worked part-time at two hospitals each of 100 beds, so that they were in effect responsible for 200 beds altogether. The results were analysed and confirmed that hospitals of over 100 beds had specific problems of their own. While an increase in the number of pharmacists employed would eliminate some problems, a more practical solution might be an increase in regional or base hospital services.

563. Petrie, G. M. **Role of supporting staff in hospital pharmacy.** *Australian Journal of Hospital Pharmacy*, Prahran, Vic., 1976, vol. 6, no. 3, pp. 119-120.

The evolution of the role of supporting staff in hospital pharmacies is discussed. There are three types of supporting staff in Australian hospitals: (i) pre-registration graduates; (ii) 'unqualified assistants'; and (iii) pharmacy technicians, attendants or assistants. The work performed by each member of the supporting staff is outlined. The development of clinical pharmacy training schemes is discussed, but it is doubtful whether in many areas there would be sufficient candidates for an ongoing programme. Proposals for the establishment of correspondence courses for training pharmacy staff on a national basis are outlined. Standards would be maintained by the Society of Hospital Pharmacists for Australia. The result of such courses would be the release of pharmacists for more professional roles, and the creation of teams of well-trained individuals to help the pharmacist.

564. Irvine, B. L. **Maintaining the place of the pharmacist in the health care team.** *Australian Journal of Hospital Pharmacy*, Prahran, Vic., 1976, vol. 6, no. 3, pp. 104-107.

A historical review of hospitals and pharmacies in New Zealand is presented and the goals and objectives of hospitals and hospital pharmacies are considered. The role of the pharmacist in health care delivery is important and optimum drug use in the health care delivery process should be the aim of all pharmacists. Aspects of pharmacy

administration are presented in the light of changes in bureaucracy and technology. The increasing numbers of graduate pharmacy students and post-graduate educational opportunities are discussed. Better educational programmes will help promote a multidisciplinary approach to patient care. The future problems that could arise as hospitals acquire a continually expanding role are discussed. The pharmacy profession will in future be judged on two aspects: the ability of the administrators and the technical knowledge and skills of all the pharmacists.

565. DAVIES, D. M. and others. **Comprehensive clinical drug information service: first year's experience.** *British Medical Journal*, London, 1977, Jan. 8, vol. i, pp. 89-90.

A comprehensive clinical drug information service, established in the Northern Region in May 1975, is manned by eight doctors, all clinical pharmacologists. The service is offered 24 hours a day. The doctors are provided with reference material and may also discuss cases with colleagues and drug manufacturers or receive literature searches from the editorial office of *Adverse Drug Reaction Bulletin*. In the first year of operation 451 enquiries were received; 89.6 per cent were by telephone and 40 per cent of these were received between 1700 and 0900. The service is used by general practitioners, paramedical colleagues, non-medical members of the public services and the general public. Although junior hospital doctors used the service most, almost half of the enquiries about adverse drug reactions came from consultants. Experience of the service indicates there is a need for a 24-hour service which must be manned by medically qualified staff.

566. SCHWENDINGER, J. Überwachung der Arzneimittelvorräte auf den Stationen der Krankenhäuser. **[Control of drugs in hospital wards.]** *Krankenhaus*, Stuttgart, 1976, Dec., vol. 68, no. 12, pp. 432-436.

Ward drug stocks should be supervised by a pharmacist or a doctor, exceptionally by a nurse. An essential prerequisite is that full data on batch coding and expiry dates should be supplied by the manufacturers. The following should not be kept on wards: drugs not in their original packaging (excluding medicines prepared in the pharmacy); medicines which could not be properly stored (e.g., because of unsuitable temperature); injections in containers which have been opened for more than a day; medicines which are no longer on the market; drugs whose expiry date has been, or is shortly to be, reached; drugs whose period of stability, as indicated by batch coding data, has been exceeded; and quantities in excess of two weeks' requirements.

567. LEY, P., JAIN, V. K. and SKILBECK, C. E. **A method for decreasing patients' medication errors.** *Psychological Medicine*, London, 1976, Nov., vol. 6, no. 4, pp. 599-601.

In a study at Barnsley and District General Hospital, psychiatric out-patients (eighty anxious and eighty depressed) whose condition required only one type of medication and who were to be seen for follow-up were assigned randomly to two groups: one receiving any one of three versions of an information leaflet about their medication, the other receiving no leaflet at all. Mean medication errors were reduced from 15 to four per cent by provision of suitably constructed leaflets. The results showed the practical importance of informing patients about their medication and of paying attention to the difficulty level of any leaflets issued.

LABORATORIES

See also Abstract Nos. 494, 549

568. Rentabilité des regroupements de laboratoires hospitaliers. [**The advantages of centralizing hospital laboratories.**] *Administration Hospitalière et Sociale*, Montréal, 1976, Oct./Nov., vol. 22, no. 8, pp. 21-24, 27-30.

A detailed description is given of the methods used to measure and compare unit costs in hospital laboratories. Regionalization is defined as specialization by one hospital in the region in one type of analysis (e.g. pathology) and centralization means that all work, with the exception of urgent analyses, is carried out in the main hospital in the area. Unit costs in regional laboratories were found to be lower than those in smaller hospital laboratories, and costs in central laboratories were slightly lower still.

569. BROWNING, D., ELLIS, M. J. and SUTHERLAND, I. T. **Emergency services in pathology laboratories.** *Gazette of the Institute of the Medical Laboratory Sciences*, London, 1976, Dec., vol. 20, no. 12, pp. 509-511.

Questionnaires about the operation of the out of normal working hours emergency service were distributed to chief technicians in laboratories with on call commitments in the Midlands and subsequently in Scotland and Wales. Of the 100 questionnaires distributed, 65 were completed; 75 per cent of the replies came from district general hospitals. The replies are analysed and discussed under the following headings: (i) type of hospital and broad outline of organization of on call work within laboratory disciplines; (ii) number of technical staff taking part in on call service and proportion of different grades which support it; (iii) organization and administration of the on call service; (iv) supervision and control; (v) effect of manning on call service on future prospects and attitudes of laboratory staff; (vi) reasons for difficulty in staffing on call commitment; and (vii) future prospects for emergency services. Nearly half of the respondents had difficulty in manning emergency services. This difficulty appears to centre on the increasing work load and unsocial hours; it is associated with fatigue accentuated by the demands of the next day's work. Future projects aimed at attracting further volunteers for on call duties will require provisions to minimize fatigue.

570. TILLETT, H. E. and CRONE, P. B. **Quality control of the isolation rate of pathogens in medical microbiology laboratories.** *Journal of Hygiene*, London, 1976, Dec., vol. 77, no. 3, pp. 359-367.

The need for quality control in laboratory products has been demonstrated by the consistent finding of significant differences between success rates in medical microbiology laboratories. The Microbiology Quality Control Laboratory (MQCL) now prepares large batches of simulated specimens inoculated with a pathogen and appropriate non-pathogenic specimens for quality control trials. The specimens arrive at the participating laboratories with specially designed report forms. As a check extra specimens are sent out to a few laboratories at every distribution with a request that these should be posted back. If the MQCL fails to find the pathogens from these specimens the distribution is regarded as unsatisfactory. Distribution of the micro-organisms is made as random as possible through thorough mixing. Two statistical analyses are outlined to compare the success rates in isolating and identifying

pathogenic organisms from specimens received by the different laboratories participating in the scheme. An example is given in which the analyses are applied to 25 laboratories that received 30 simulated specimens. The use of quality control in this field is a relatively new system and provides the opportunity for developing suitable analytical methods.

DIAGNOSTIC X-RAY DEPARTMENT

571. SCHMETTOW, D. **Advances due to the magazine technique—problems and solutions.** *Electromedica*, Erlangen, 1976, vol. 44, no. 4, pp. 124-129.

The magazine technique relieves the staff of the diagnostic X-ray department of the task of handling films and cassettes. In this way, the radiological work is rationalized. The gain due to rationalization depends upon the degree to which the film handling is automated. This gain benefits those activities for which no automation is possible—the X-ray examination itself and patient care. The magazine technique, however, also has certain problems: (i) the films and processing machines affect the design, function and operation of magazine X-ray units; and (ii) the units have an effect on the course of the X-ray examination and lead to new forms of organization. For certain applications, in particular image-intensifier radiography, the magazine technique has already become routine. The introduction of the magazine technique for large-format film has, however, only just begun.

572. MANI, R. L. **RAPORT radiology system: results of clinical trials.** *American Journal of Roentgenology*, Springfield, 1976, Nov., vol. 127, no. 5, pp. 811-816.

RAPORT, an automated radiology management and report system, is currently operational in more than 25 hospital departments of varying sizes and types. This paper describes briefly the functions and operations of the system in its present production state and reviews recent data gathered from 19 installations in operation for six months or longer and four systems which failed. The conclusions drawn are: (i) the initial design concept of RAPORT, combining mark sense forms and dictation as the reporting vehicle, is valid but use of the second generation of forms is mandatory; (ii) significant reduction in report generation turnaround time can be achieved, but implementation of system capabilities is a function of organizational skills; and (iii) any radiology which relies on automated reporting alone without including sophisticated administrative management and billing functions as well as integrative capabilities with other systems will not survive prolonged cost-benefit scrutiny.

573. SCHMIDT, H. and BOEHME, K. D. **Programmed radiological reporting: a description of existing systems, general comments and a critical appraisal of the value of programmed reporting.** (EDV in Medicin und Biologie, Supplement 1) Stuttgart & New York, Gustav Fischer, 1977, viii, 72pp.

This booklet contains an abridged version of a paper originally written in German in 1974, together with an English translation. It is in three parts: (i) descriptions of various systems of programmed radiology reporting from the most simple automatic typewriter to the system based on a large hospital computer; (ii) some major shortcomings of the conventional report; and (iii) a critical appraisal of the value of programmed reporting from the points of view of formulation and transmission of the diagnosis, the value of storage and the resultant possibility of scientific evaluation,

the possibility of retrieval, and the efficiency of the systems. It is concluded that depending on the objectives, expectations have usually remained more or less unfulfilled. Diagrams and a bibliography (brought up-to-date) are included.

574. MITCHELL, J. and BRETT, W. **A terminal digit color-coded file.** *Office*, Stamford, Conn., 1976, Oct., vol. 84, no. 4, pp. 35-36.

St. Vincent Infirmary, Little Rock, Ark., has converted its X-ray records to a colour-coded terminal digit system to simplify the removal of non-active records. Terminal digit filing assures constant load of the file from one end to the other and jackets no longer have to be moved. This has saved about 150 manhours. Better use of space has made it possible to file 15 per cent more folders in 30 per cent less floor space. A different colour label for each year is placed on the visible edge of the jacket at the time of first activity. All jackets active in the current year have a green label, those with no activity for one year carry a light green label and those without activity for two years have an orange label. A rapid visible scan makes it possible to remove quickly those records which have become inactive.

REHABILITATION

575. MONKS, J. **Environment and 'debility' in spinal injury.** *Nursing Times*, London, 1976, Dec. 16, vol. 72, no. 50, occasional papers, pp. 177-180; Dec. 23/30, vol. 72, no. 51, occasional papers, pp. 181-184.

A survey was designed to investigate the relative significance to rehabilitation of a number of factors, particularly those in the social and physical environments. The main interest was in changes in the physical status of the severely disabled. Information was collected from a sample of spinal injury patients and their relatives concerning methods of bladder management, the importance of independence, and difficulties experienced. Homes were assessed for their suitability and medical information was obtained from hospital records. The criterion for measurement was the difference between the potential level of independence of the patient and 'theoretical' potential from a medical point of view. The role of the physical environment, as perceived by the subjects and their helpers, and also as assessed by the interviewer is examined. The results indicate that it was the subject's own expectations which were most significant to his debility. Very high debility scores were associated with the receipt of personal help. The results suggest that the crucial point about physical arrangements is whether they allow independent performance or provoke personal help. Questions are raised regarding the desirability of debility. The state of debility reflects the characteristics and effects of a particular situation and indicates how change may most effectively be attempted.

576. POOLE, A. E. **A stroke rehabilitation service.** *Nursing Times*, London, 1976, Dec. 16, vol. 72, no. 50, pp. 1977-1979.

A stroke rehabilitation service has been available for the past four years in the Hove and Portslade part of Brighton Health District to care for patients in their own homes. Patients are referred by general practitioners or the community nursing team. A community nursing sister and colleague establish a programme to help the patient recover. General nursing care is provided by the community nursing team during the

acute stage which can vary from a few days to two or three weeks. Patients discharged from Hove General Hospital and the Briggs Day Unit at Brighton General Hospital may also be referred to the service. In conjunction with the stroke service is the Stroke Rehabilitation Club which provides a meeting point for patients, means of counteracting depression, group speech therapy and independence. Discussions held with the physiotherapy department and the Briggs Day Unit resulted in the framework of a programme for the two-hour sessions and about 22 patients attend each of the two weekly sessions regularly, their ages ranging from 30 to 75 years. The work of the club and the patients who attend are discussed.

OCCUPATIONAL THERAPY DEPARTMENT

See Abstract No. 469

DEPARTMENTS FOR SPECIAL THERAPY

See also Abstract Nos. 491, 594, 600, 608

577. BEEVERS, D. G. and others. **A blood pressure clinic in a health centre.** *Postgraduate Medical Journal*, Oxford, 1976, Nov., vol. 52, no. 613, pp. 683-686.

A hypertension clinic was established in a health centre in Renfrew following a screening survey. The clinic uses two consulting rooms and a waiting and documentation area. Direct access is available to the general practitioners and their records. The clinic is staffed by three hospital doctors each working an average of two sessions a week, supported by a specially-trained nurse to take blood pressure and secretarial, radiological and laboratory help provided at the Western Infirmary, Glasgow. All 368 patients who have attended the clinic had a diastolic pressure of 95 mm./Hg or more on two occasions. Attendance of patients was high with a low defaulting rate among those needing treatment. The clinic has provided many opportunities for clinical research and has proved acceptable to patients, hospital doctors and general practitioners. The simplified protocol has been found effective in managing a large number of hypertensive patients detected by a screening programme.

INTENSIVE CARE UNITS

See also Abstract No. 468

578. CHEW, H. E. R. and HANSON, G. C. **A case for the medical administrator of an intensive therapy unit to be trained in intensive therapy.** *European Journal of Intensive Care Medicine*, Berlin, 1976, vol. 2, no. 3, pp. 107-110.

It is suggested that there should be available postgraduate training schemes for members of the medical profession who ultimately wish to work on an intensive therapy unit (ITU) at consultant level. The lack of a medical unit administrator tends to lead to a non-unified approach to patient management, an unhappy unit atmosphere and deterioration in staff morale. The duties of the medical unit administrator of an ITU in a district general hospital are outlined. Schemes are suggested for further training for physicians or anaesthetists particularly interested in critical care. If it is

accepted that specialist training is required it is recommended that the unit administrator for a district general hospital should be selected at registrar level so that arrangements can be made for appropriate further training.

579. SIEGEL, J. H. and others. **Computer-based consultation in 'care' of the critically ill patient.** *Surgery*, St. Louis, Mo., 1976, Sept., vol. 80, no. 3, pp. 350-364.

The computer-based clinical assessment, research and education system (CARE) is a time-shared computer system now available on a national basis to provide a management and education aid for the treatment of critically ill surgical patients. It is designed as a consultative aid and can be used by doctors, nurses, technicians and other paramedical staff. From an initial clinical assessment and operative note entered into the system an estimation of the initial fluid, blood and electrolyte deficiencies can be calculated. Patient data is entered after each shift and the metabolic balance, calorie requirements, various therapeutic suggestions and warnings are given to advise the doctors of problems that may be developing. The use of the computer to provide consultative services on the basis of data sharing is considered. The surgeon is assisted in making the best critical care decisions through computer-directed, interactive prompting which focuses on the most important clinical conditions, correlations and metabolic considerations and relates the important problem to the relative literature.

580. HILTON, B. A. **Quantity and quality of patients' sleep and sleep-disturbing factors in a respiratory intensive care unit.** *Journal of Advanced Nursing*, Oxford, 1976, Nov., vol. 1, no. 6, pp. 453-468.

Inability to obtain sufficient sleep is a common complaint of hospital patients especially in intensive care units. A study using continuous polygraphic recording, observation and interview attempted to identify the quantity and quality of sleep and the factors which disturbed the sleep of selected patients in a respiratory intensive care unit. Documentation of behaviour which might be related to sleep deprivation and identification of factors which the patients perceived as interfering with rest and sleep were also recorded. The findings indicated that patients experienced quality and quantity sleep deprivation and that their sleep was interrupted frequently due to many causes. The implications are that more judgment is needed in deciding when patients should be disturbed and that many sources of stimulation which cause disturbance could be eliminated, controlled or co-ordinated. Behavioural changes related to sleep deprivation were observed. Since only one unit was used the sample was small and no generalizations can be made. Most disturbance was caused by noise, the source of which was staff communication, environment, equipment, and the other patient and his care.

SPECIAL HOSPITALS AND UNITS

OUT-PATIENT

See also Abstract Nos. 577, 590, 591, 600, 601

581. REDMOND, J. M. **Apply effective fiscal techniques to improve ambulatory care.** *Hospitals*, Chicago, 1976, Nov. 16, vol. 50, no. 22, pp. 93-95.

A committee of the Hospital Association of Pennsylvania has recommended five

basic methods by which hospitals may improve operational and financial aspects of ambulatory care: (i) reduce costs in ambulatory care by shifting appropriate joint costs or overhead costs to the in-patient areas through a review of cost allocations and cost-finding techniques; (ii) increase revenue by improving billing and collection policies and procedures; (iii) increase revenue by maximizing reimbursement from third-party payers; (iv) decrease costs by reviewing staff needs, space allocation, and use of services; and (v) increase revenue by developing hospital-based group practices.

CASUALTY AND ACCIDENT

See also Abstract No. 515

582. METSCH, J. M. and others. **A conceptual framework for emergency care planning.** *Journal of the American College of Emergency*, Lansing, 1976, Oct., vol. 5, no. 10, pp. 782-786.

In planning for a new emergency unit at the 970-bed City Hospital Center, Elmhurst, New York, careful attention was given to the development of a conceptual framework that would permit realistic functional planning taking into account patient loads, types of problems treated, and a variety of institutional restraints. The planning approach was based on the following steps: (i) delineation of categories of emergency care to be provided; (ii) task analysis of the activities of the staff for different categories of emergency care; and (iii) estimation of resources needed for different emergency care categories. In addition to facilitating the planning process for the unit, it has given the staff a common conceptual framework for analysing patient care as provided and for identifying areas where improvements can be made. In addition, a new approach has been developed for communicating with other departments and the administration on day-to-day problems which may be useful for addressing other resource allocation and operating theatre time schedules.

CHEST

See Abstract No. 580

INFECTIOUS DISEASES AND ISOLATION

583. GOLDACRE, M. J. **Acute bacterial meningitis: where do children die?** *International Journal of Epidemiology*, London, 1976, Dec., vol. 5, no. 4, pp. 343-347.

In the years 1969 to 1973 there were 687 cases of acute bacterial meningitis, including 72 deaths, in children under 10 years in the North West Metropolitan region of England. Ten per cent of all hospital admissions were to infectious disease hospitals, 16 per cent to teaching hospitals and 74 per cent to general, non-teaching (regional board) hospitals. The case-fatality rates associated with these hospitals were three, three and 11 per cent respectively. The difference between regional board and other hospitals was smaller, although still present, when children who died within a few hours of hospital admission were excluded from the analysis. Twenty-two per cent of all deaths occurred before specialist care was reached. It may be possible to reduce

the mortality from this disease by improving facilities for treatment in some hospitals. There is, however, an important residue of deaths which would be unaffected by such improvements.

CHILDREN

See also Abstract Nos. 482, 588, 602, 610

584. NATIONAL ASSOCIATION OF HEAD TEACHERS. **Hospital schools in England and Wales: report of a working party.** Haywards Heath, National Association of Head Teachers, 1976, 24pp. £0.20

This report is based on a 75-question form completed by 130 of the 171 hospital schools/units to whom it was sent. The survey covers: organization and administration; buildings and accommodation; teaching facilities; the children; the staff; and liaison between schools and hospitals and between schools and parents. The working party which conducted the survey makes a number of recommendations for improvements.

585. LYNCH, M. A., ROBERTS, J. and GORDON, M. **Child abuse: early warning in the maternity hospital.** *Developmental Medicine and Child Neurology*, Tadworth, 1976, Dec., vol. 18, no. 6, pp. 759-766.

At least three per cent of all mothers delivered at a large modern maternity hospital have identifiable problems likely to lead to bonding failure or child abuse. Fifty recent referrals to the service for child abuse at Park Hospital, Oxford, were born in the local maternity hospital; 29 of these were known to the maternity hospital social worker during the pregnancy or neonatal period. They could be distinguished from a typical group of social work referrals by three simple measures: (i) the abused group were more likely to have been in the special care nursery; (ii) their family's social problems at delivery were 'diffuse' rather than 'defined'; and (iii) concern over mothering was recorded in the maternity hospital records in 72 per cent of the cases compared with 15 per cent of the contrast group. It is concluded therefore that families 'at risk' can, in practice, be ascertained in the maternity hospital and preventive help offered early.

GERIATRICS AND LONG-STAY

See also Abstract Nos. 470, 471, 543, 603

586. BRICKNER, P. W., JANESKI, J. F. and DUQUE, T. **Hospital home health care program aids isolated, homebound elderly.** *Hospitals*, Chicago, 1976, Nov. 1, vol. 50, no. 21, pp. 117-118, 120, 122.

The Chelsea-Village programme was started in 1973 to meet the health care needs of the isolated, housebound elderly living in the Chelsea and Greenwich Village areas around St. Vincent's Hospital, New York. The aim of the scheme is to help the housebound elderly remain in their own homes out of institutions in the best possible state of health and at the maximum level of independence. Teams of doctors, nurses and social workers provide a full range of health care services in the patient's homes. Continuity of the relationship between the health worker and patient is emphasized. Hospital services can be easily provided if necessary as there are close links between the teams and St. Vincent's Hospital. The service is supported by grants, and the hospital

is responsible for the staff who carry out the scheme during regular paid working hours. The savings generated over a 12-month period by maintaining patients at home instead of in nursing homes are estimated at $500,000. The implications of such savings on a national basis are discussed.

587. COWPER-SMITH, F. **Teaching excellence in residential care of the severely handicapped.** *Nursing Times*, London, 1976, Dec. 23/30, vol. 72, no. 51, pp. 2001-2003.

Developments in residential care of the severely handicapped indicate that ideally the disabled person should be looked after in a family unit within the community. A system of community care of the handicapped has been developed in Sweden. The Fokus philosophy states that there are four basic needs of the handicapped person: a home, a job, cultural and social needs, and integration with the able-bodied. The development of Fokus in Sweden is discussed. Community flats are built for the disabled and able-bodied together, and the needs of each disabled resident are decided by the resident himself. There is security of tenure, and free public transport. However only 300 out of 3,000 estimated handicapped people are being treated in this manner although it is too early to know what will happen when they become ill, get old or their condition deteriorates. These philosophies have been instrumental in the design and care of the Chatsworth wing in the grounds of the Royal Hospital and Home for Incurables, Putney, London. This is a 30-bed unit for the younger disabled. Problems of selecting patients, the amount of say residents should have in running their home and the need for more units to take younger disabled are discussed. Medical problems associated with the care of the elderly are also outlined.

CANCER

588. STUETZER, C., FOCHTMAN, D. and SCHULMAN, J. L. **Mothers as volunteers in an oncology clinic.** *Journal of Pediatrics*, St. Louis, 1976, Nov., vol. 89, no. 5, pp. 847-848.

Mothers of children who had died of cancer were successfully used as volunteers in a paediatric cancer clinic to provide emotional support and practical assistance to other children afflicted with the same disease and to their families. At the start of the programme the volunteers were carefully interviewed to determine their willingness and their emotional ability to participate on a consistent basis. Following an eight-week training programme with a psychiatrist, a social worker and a nurse, they began working in the clinic one day a week. Over an 18-month period they have become valuable members of the treatment team by helping to improve communications, to alleviate frustrations, and in giving additional emotional support to the children and their families.

NEUROLOGY AND NEUROSURGERY

See also Abstract Nos. 575, 576

589. BURNSIDE, I. G., and COOK, J. B. **Factors influencing readmission to hospital.** I. Tetraplegia. *Paraplegia*, Edinburgh, 1976, Nov., vol. 14, no. 3, pp. 220-224.

Patients with cervical spinal cord paralysis admitted for the first time to the

Yorkshire Regional Spinal Injuries Unit were reviewed over a 10-year period. The data were analysed according to the Siegel x^2 test, by occupational status, age and amount of damage to the spinal cord. The results of the investigation revealed that it is only age and the occupational status of the patient that are related to readmission to hospital. This confirms the view that problems of rehabilitation bear little relationship to the extent or severity of disability. There was no relationship between readmission and whether the paralysis was complete or incomplete. The results suggest that in tetraplegia it is the age-group under 30 who are least able to care for themselves in the community and who most frequently require hospital readmission.

UROLOGY

See also Abstract No. 491

590. JEFFERY, P. J. **Calculus disease of the urinary tract at a district hospital.** *Postgraduate Medical Journal*, Oxford, 1976, Nov., vol. 52, no. 613, pp. 697-699.

The organization of a clinic to deal with calculus disease of the urinary tract at a district general hospital is discussed. The 200 patients referred between August 1972 and September 1974 are reviewed. The results of treatment at the clinic should encourage clinicians to establish more such clinics as it is now known that the spectrum of calculus disease seen at a district general hospital is identical to that seen at specialized units.

SURGERY

See also Abstract Nos. 512, 579

591. O'DONOVAN, T. R. **Ambulatory surgical centres: development and management.** Germantown, Md., Aspen Systems Corporation, 1976, xvii, 251pp. $19.00

This book discusses the steps that are needed to create or expand a formal programme of ambulatory or out-patient surgery in both hospital units and independently operated facilities. It is in four parts: (i) a master plan or conceptual framework for the concept of ambulatory surgery; (ii) case studies of successful hospital-based ambulatory surgery units in the United States and Canada; (iii) a description of the major issues relating to free-standing independently operated facilities, together with case studies from the United States; and (iv) the broad issues in ambulatory surgery. A bibliography is included.

MATERNITY

See also Abstract Nos. 529-531, 534, 585

592. CURZEN, P. and MOUNTROSE, U. M. **The general practitioner's role in the management of labour.** *British Medical Journal*, London, 1976, Dec. 11, vol. ii, pp. 1433-1434.

A study designed to determine the incidence of unexpected maternal and foetal emergencies arising during labour in low-risk patients was carried out at Queen Mary's Hospital, Roehampton, London. The incidence of all emergencies in labour to this

low-risk group of women was 7.1 per cent, of which three per cent were maternal emergencies and 4.1 per cent foetal emergencies. All these emergencies required prompt intervention and intensive care by staff who were fully conversant with techniques and interpretation of cardiotocography and foetal blood pH determination. Intensive care of patients by general practitioners would be incompatible with the competing demands of their other responsibilities. In practice midwives carry the main responsibility for providing the intensive care of patients in labour and for conducting normal deliveries. When problems arise midwives find it easier and quicker to obtain help from members of the hospital obstetrics team with the full range of specialist skills rather than from a general practitioner who may be difficult to locate, and whose technical skills may be limited. It is recommended that there should be facilities for suitably trained general practitioners to participate in intrapartum care on a regular and committed sessional basis as members of the consultant-run obstetric team.

593. PHAROAH, P. O. D. **Obstetric and neonatal care related to outcome: a comparison of two maternity hospitals.** *British Journal of Preventive & Social Medicine*, London, 1976, Dec., vol. 30, no. 4, pp. 257-261.

Infants of birthweight up to 2500 g. born in 1966 in two district hospitals were followed up until their school medical examination at six years. The two hospitals concerned in the survey and their policies relating to perinatal management represent polar views of the controversies that existed at the time and perhaps accounted for differences in the neonatal mortality rate. The prevalence of mild or severe handicap among the survivors did not differ significantly between the cohorts; an improved mortality rate was not achieved at the expense of an increased overall morbidity although there was a suggestion of a difference in cerebral palsy prevalence. The results of the two hospitals are compared. It is suggested that neonatal mortality rate in conjunction with the prevalence of handicaps among the survivors of low birthweight infants be used as an indicator of the efficacy of perinatal care.

GYNAECOLOGY

594. LAWSON, J. B. and others. **Management of the abortion problem in an English city.** *Lancet*, London, 1976, Dec. 11, vol. ii, pp. 1288-1291.

The demand for legal abortion in 1968 produced a lack of co-ordination between local gynaecology units which hindered rational planning to cope with it. In the Tyne and Wear conurbation the main burden of legal abortions first fell on Newcastle General Hospital. Increasing demand and restriction of services resulted in more operations after the 12th week, increased morbidity and longer hospital stay. A central abortion referral system was established to reduce the delay between referral by the general practitioner and the out-patient consultation, with a view to providing an appointment within seven days for all cases, and to distribute the patients requesting termination equitably between the eight consultants in the city. The results of the scheme indicate that the number of referrals has remained approximately the same since the central appointments bureau opened, although establishing a catchment area has also halved the proportion of distant referrals. The effects of the scheme on neighbouring hospitals, methods of termination and gynaecology services are discussed. The system provides a prompt and equitable service for all patients.

PSYCHIATRY

See also Abstract No. 472

595. AHMED, P. I. and PLOG, S. C., editors. **State mental hospitals: what happens when they close.** New York & London, Plenum, 1976, xiv, 219pp. £12.29

The current trend is towards closing the large state psychiatric hospitals in the United States. The papers in this volume discuss the advantages and disadvantages of this movement, which first appeared in the 1960s, and is now gathering momentum. Among the difficult human and legal issues discussed are patients' rights, practical problems of relocating displaced patients, community readiness for the change, and the effects of closing on both the patients and hospital staff.

596. CARTER, D. E. and NEWMAN, F. L. **A client-oriented system of mental health service delivery and program management: a workbook and guide.** (National Institute of Mental Health, Series C, No. 12; DHEW Publication No. (ADM) 76-307) Washington, U.S. Government Printing Office, 1976, x, 125 pp. $2.00

Developed as a guide for clinical and programme decision-making, this publication also serves as a guide for the design of information systems to support the decision-making process. It describes procedures for collecting, processing and using data on clients served, staff activities, cost accounting and measures of clinical outcomes. Originally published by the Pennsylvania Department of Public Welfare, it has been reprinted by the National Institute of Mental Health so that it can be made more widely available.

597. BICKFORD, J. A. R. and BICKFORD, M. E. **The private lunatic asylums of the East Riding.** (E.Y. Local History Series No. 32). Beverley, East Yorkshire Local History Society, 1976, 58pp. £1.15

During the 19th century there were 14 licensed private psychiatric institutions open for varying periods in the East Riding of Yorkshire. They varied in size from three to 115 beds. Following an introduction setting the background, this booklet gives brief details of each of the institutions.

598. MANN, S. A. and CREE, W. **'New' long-stay psychiatric patients: a national sample survey of fifteen mental hospitals in England and Wales 1972/3.** *Psychological Medicine*, London, 1976, Nov., vol. 6, no. 4, pp. 603-616.

Four hundred patients who had been continuously in a psychiatric hospital for more than one but less than three years and who were aged 15 to 64 years at the time of admission were studied and assessments of their needs for treatment and accommodation were made. About one third appeared to need further care in hospital. A further third could possibly be discharged if suitable accommodation in the community were available: most of this group were more handicapped than present residents in hostels. The remaining third had diverse needs; many were multiply handicapped, for example by physical disability or mental retardation in addition to psychiatric disorder. At the moment the psychiatric hospital is virtually the only agency to accept the care of such people.

599. COBB, J. P. and GOSSOP, M. R. **Locked doors in the management of disturbed psychiatric patients.** *Journal of Advanced Nursing*, Oxford, 1976, Nov., vol. 1, no. 6, pp. 469-480.

There has been a general trend for psychiatric hospitals to follow an 'open-door' policy. The temporary closure for six months of the only permanently locked ward in a London postgraduate teaching hospital provided an opportunity for studying the changes in the attitudes of staff. Redistribution throughout the hospital of patients who would otherwise have been cared for on the locked ward gave the investigators the opportunity of recording any changes which occurred in the behaviour of staff and patients. The study was carried out upon the six general wards which contained 148 beds. Another consequence of the closure was a slight reduction in the number of seriously disturbed patients admitted. The results indicated that the most effective means of managing disturbed patients is to increase the number of nurses on the ward and that locking the main door of the ward is likely to increase tension among the patients. Violent and aggressive behaviour places special stresses on nursing staff and appears to be an important variable leading to locking the ward door. The relationship of absconding, and staff/patient ratio to locked doors is discussed. On the basis of the results it appears that locking a ward door can make an important positive contribution to patient care.

600. INTAGLIATA, J. **A telephone follow-up procedure for increasing the effectiveness of a treatment program for alcoholics.** *Journal of Studies of Alcohol*, New Brunswick, N.J., 1976, Sept., vol. 37, no. 9, pp. 1330-1335.

A study into the use of out-patient services by alcoholics was carried out in the alcoholism treatment unit of the Veteran's Administration Hospital, Buffalo, N.Y. Forty patients were randomly assigned to a control and two experimental groups. The 20 controls received no telephone contacts from the staff during the first three months following their discharge. Ten patients in experimental group A received all of their telephone contacts from the same member of staff, whilst those in experimental group B were called alternately by one of two different members of staff. The patients were assessed for: (i) success or difficulties in maintaining abstinence; (ii) employment status; (iii) stability of living situation; and (iv) whether the patient had been readmitted for treatment. The results indicate that the continued use of out-patient care is strongly related to rehabilitative gains and that it can be significantly increased by means of a telephone follow-up procedure. The telephone call provides the opportunity for two-way communication of an immediate nature, and places fewer demands upon the time of staff engaged in both in-patient and out-patient care. The small sample size and short follow-up suggest that the findings of the study are tentative and a continued monitoring of the present sample is being conducted with six-month, one-year and two-year follow-up reports.

601. COLIN-GERARD, M. La sectorisation en psychiatrie: une expérience en Alsace. **['Sectorisation' in psychiatry: as experienced in Alsace.]** *Techniques Hospitalières*, Le Kremlin-Bicêtre, 1976, Dec., vol. 32, no. 375, pp. 58-61; summaries in English, German, Spanish and Italian, p. 61.

A psychiatrist describes her experience over a period of three years as leader of a psychiatric team in a densely populated mixed urban and rural sector of Alsace. The

team holds seven out-patient clinics each week, four in Mulhouse and three in St. Louis. One of their main objectives is to be readily and easily available to anyone seeking psychiatric help. The team consists of a psychiatrist, social worker, psychologist, nurse, and secretary. Those who attend the clinics include patients discharged from the psychiatric hospital at Rouffach and people attending for the first time on the recommendation of a general practitioner, social worker, or acquaintance. Many of the latter come because they experience the need to share their problems with another person. The team nurse also makes domiciliary visits in the sector. One difficulty encountered by the team is that they are often called on by third parties to intervene in domestic disputes or to deal with drug addicts or alcoholics who have not themselves asked for help.

602. TIPTON, G. **A state hospital adolescent unit as a community resource.** *Social Casework*, Albany, 1976, Nov., vol. 57, no. 9, pp. 586-589.

Austin (Tex.) State Hospital has a catchment area of 34 counties covering a wide range of population. Since there are very few facilities and little opportunities for a thorough neuropsychiatric evaluation of adolescents in the area the hospital has established an evaluation scheme to determine whether treatment is necessary, and altered its function from a long-stay psychodynamically-oriented psychiatric facility to that of a hospital. Agencies are encouraged to refer patients at an early date in the course of the illness. Treatment is administered in the adolescent unit. It is geared to the care of the severely ill patient and there is no division of effort in attempting to treat behaviour disorders and patients with psychoses. Of 600 admissions in two years only six patients have been in the hospital for longer than a year. The average length of stay in the unit is now 43 days instead of over six months with an estimated readmission rate of 20 per cent. The scheme is discussed. Community mental health centres, clinics and doctors have welcomed the change in emphasis in the unit and referrals for out-patient and brief in-patient evaluations have rapidly increased. A two-year follow-up study is in progress which should produce important data on the success of the treatment.

603. SIMON, R. J. and others. **Pathways to the hospital for the geriatric psychiatric patient in New York and London.** *American Journal of Public Health*, Washington, 1976, Nov., vol. 66, no. 11, pp. 1074-1077.

The pathways taken by psycho-geriatric patients in New York and London from the time of the onset of a psychiatric crisis to admittance to hospital are analysed. The geographical area studied in New York was Queens County and in London the former borough of Camberwell. A consecutive series of 50 new admissions were interviewed in each city and the events and the patient's activities before admission analysed. The results reveal that the time from the onset of the episode to admission is shorter in London than in New York. The major portion of this difference is accounted for by the longer time spent in New York between episode onset and intial medical contact. In New York harmful behaviour is a major reason for admission, whereas in London the major reason is psychiatric symptoms. In London the doctor is significantly more involved in the decision to admit: in neither city is there a significant relationship between living alone and the length of time from onset of the episode to admission. The study suffers from being retrospective although it provides hypotheses which are being tested on samples of people in the community in London and New York.

604. HEGARTY J. R. **An introductory course for 'care staff' in educational techniques.** *REAP*, Amsterdam, 1976, Oct., vol. 2, no. 2, pp. 115-122.

An introductory course in educational principles and techniques for the staff of hospitals for the mentally handicapped is discussed. The course is seen as potentially contributing to the improvement of conditions in living units for the mentally handicapped by helping to meet a suggested need for staff training. The three teaching objectives of the course are: (i) the description of basic concepts of educational care; (ii) an introduction to teaching methods and principles; and (iii) discussion of the provision of an actively educational regime in a residential unit. The course content is discussed. Until data on the effectiveness of the course have been gathered its value is uncertain, and until all tutors can incorporate a system of evaluation which assesses the effectiveness of the syllabus they teach rather than their teaching, it will remain so.

605. MARTINDALE, A. **A case register as an information system in a development project for the mentally handicapped.** *British Journal of Mental Subnormality*, Birmingham, 1976, Dec., vol. 22, no. 43, pp. 70-76.

The Sheffield case register provides information to be used in the planning, management and evaluation of the Sheffield Development Project in co-operation with the local health care planning team for mental handicap and an independent evaluation research group from Sheffield University. The initial search census carried out on the register is discussed. Services for children under five, school children, hospital patients and those cared for by the local authority were analysed. The overall picture of services in Sheffield is one of inadequate levels of provision of basic services which forces the community to cope rather than help it to assimilate many of the mentally handicapped. A large number of people who lived at home and received no regular day services of any kind were identified. The survey also revealed areas of concern in the management and planning of services in Sheffield. The future success of the register will depend upon maintaining close links with all the agencies that have been formed, on achieving proposed increases in levels of support and making satisfactory arrangements for data processing facilities.

606. MURRAY, A. **Implementing a behaviour modification programme.** *Nursing Times*, London, 1977, Feb. 3, vol. 73, no. 143, pp. 171-174.

Isla Ward, Ladysbridge Hospital, Banff, established a behaviour modification programme for its 30 patients with varying degrees of mental subnormality. The ward was used for new admissions and also as one to which patients were sent from other wards when their behaviour severely disrupted other patients. The majority of patients were institutionalized and the nurse's role was purely custodial. The behaviour modification scheme is outlined. An experimental token system for entertainments was developed first for three equivalent groups of patients, to encourage a better understanding between different grades of patients. This scheme was later developed into a specific token economy system with the aim of improving behaviour and overall performance. The use of reinforcers is discussed together with the need for balancing the token system with the activities carried out. A token bank was introduced so that tokens not used on the day they were earned could be saved up to pay for less frequent activities. The need for continuity of nursing staff is vital as change is disturbing to

patients. The token economy scheme has been in operation for only a short time but already improvement has been noted in the patients' behaviour and this is being maintained.

607. PLANASKY, K. and JOHNSTON, R. **A survey of patients leaving a mental hospital against medical advice.** *Hospital & Community Psychiatry*, Washington, 1976, Dec., vol. 27, no. 12, pp. 865-868.

A survey was carried out of a consecutive series of 100 male in-patients in a 700-bed psychiatric hospital who submitted a formal request for discharge against medical advice within an 11-month period. These were compared with a control group of a random sample of 100 patients admitted during the same period who did not submit such a request. The results revealed that the majority of those who submitted the request were alcoholics or schizophrenics. The reasons for the requests were analysed and findings suggest that less stable patients cannot tolerate hospital treatment. Many were either separated or divorced, were younger than patients in the control group, and were in more turbulent phases of their illness. More than 60 patients submitted their requests while on an open ward. It is recommended that the request to leave should be considered as a psychiatric problem to be anticipated during the course of treatment.

608. BRENNER, H. D., FÖHRENBACH, B. and STRAHMKE, W. Aufbau und Arbeitsweise einer verhaltenstherapeutischen Station für Drogenbhängige in einem psychiatrischen Landeskrankenhaus. **[Organization and function of a behavioural therapy ward for drug addicts in a *land* psychiatric hospital.]** *Öffentliche Gesundheitswesen* (*Das*), Stuttgart, 1976, Dec., vol. 38, no. 12, pp. 776-786; summary in English p. 776.

In September 1974 an in-patient unit for behaviour therapy of young drug addicts was opened at the Reichenau Psychiatric Hospital. It is staffed by a doctor, a psychologist and six others, three of whom were already experienced in the treatment of drug addiction. Certain initial difficulties, including resistance by other departments of the hospital, had to be overcome. So far the average number of patients in the unit has been eight but this figure will rise now that it is fully operative. The treatment provided is described. Of the 42 patients admitted between September 1974 and November 1975 five discharged themselves after two to 20 days: the average stay of the remainder was 113 days with a maximum of 343 days. Patients were of both sexes, aged between 16 and 25. Of the 25 patients with over 30 days' stay so far discharged three had to be admitted to psychiatric wards: of the 12 remaining ex-patients who were followed up four ended up in prison, four were sufficiently rehabilitated to return to school, and four are considered to be free of addiction. Bearing in mind that the majority of the patients were referred by the courts, and had no motivation towards cure, the results are regarded as satisfactory.

609. BRADLEY, M. E. **Establishment of a day hospital.** *Nursing Times*, London, 1977, Feb. 17, vol. 73, no. 7, pp. 246-249.

A psychiatric day hospital for 40 patients was opened in the grounds of Whiteabbey General Hospital, Co. Antrim, in 1974. Most of the treatment is presented within a group setting to allow patients the benefit of sharing their experiences and collaborating

with each other. A daily community meeting is held for all staff and patients. The treatment in psychotherapeutic settings, art classes and behavioural settings is outlined. There are daily relaxation classes and a mother and children's group for treating disturbed relationships between patient and child. A community nursing team using the services of a health visitor and district nurse provides regular feedback about ex-patients in the community. The unit offers a psychiatric assessment and treatment service to general hospital patients whilst receiving the diagnostic facilities of the hospital nearby. Each member of the staff and each patient is allowed as much responsibility as they can undertake. The unit sees 230 patients in the clinic per month and an increasing number of patients receive treatment on an out-patient sessional basis.

610. SILVER, L. B. **Difficulties in integrating child and adolescent training and service in a community mental health center.** *Hospital and Community Psychiatry*, Washington, D.C., 1977, Jan., vol. 28, no. 1, pp. 26-30.

In 1972 Rutgers Community Mental Health Center opened as an integral component of the department of psychiatry at the new Rutgers Medical School, and became the primary clinical facility for training and service. The child and adolescent programmes within the centre were divided into outreach and inhouse services. The outreach programmes related to all out-patient and community-based activities and the inhouse programmes included administrative and business services, specialty programmes, partial and in-patient care and other support programmes. The main advantage in the area of training was the multidisciplinary multimodal approach followed by the medical students, residents and fellows. Problems have been: (i) conflict between the goals and priorities of the department and the centre; (ii) difficulties in implementing a functional continuum of care programme; (iii) difficulty with aspects of the multi-disciplinary model; and (iv) difficulty with areas of the training programmes. The biggest weakness is thought to be in having the centre as the only clinical component of the department. Nevertheless the experience of the department of psychiatry has shown the advantage of having a mental health center with each unit helping the other but each remaining autonomous.

SOCIAL MEDICINE

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